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COUNTY COUNCIL OF SALOP.

ANNUAL REPORT

of the

County Medical Officer of Health
for the year 1923.

JAMES WHEATLEY, M.D., D.P.H.

SHREWSBURY,

August, 1924.

TO THE CHAIRMAN AND MEMBERS OF THE PUBLIC HEALTH AND HOUSING
COMMITTEE OF THE SALOP COUNTY COUNCIL.

GENTLEMEN,

I have the honour to present my Annual Report for 1923.

The Maternity and Child Welfare, Tuberculosis and Venereal Disease Schemes are being maintained and to a small extent extended in some directions.

Financial stringency still continued to some extent to prevent the carrying out of any extensive sanitary schemes, and also to impede the ordinary routine work of improvement and repair. It is difficult, however, to understand why works of great importance to the public health should be held up on account of expense, whilst other works are undertaken at the public expense for the express purpose of giving employment. In developing schemes for the unemployed, the importance of carrying out some of the much delayed public health schemes might well be considered.

Under such circumstances the energies of those responsible for public health should be turned to the most important and at the same time the most economical of all public health work, viz., the education of the public in the laws of healthy living.

The training of all nurses in hygiene based on physiology would prove a most important step in the education of the public, particularly in rural districts.

In the interest of the health of the people, it is greatly to be deplored that the scheme of continuation classes has been indefinitely postponed. Continuation classes would open up great possibilities in the teaching of the laws of healthy living and in establishing a really effective system of national physical training. I can conceive no other measure that would be likely to have such a beneficial effect upon the life of the nation.

I am, Gentlemen,

Your obedient Servant,

JAMES WHEATLEY.

PUBLIC HEALTH DEPARTMENT,
COUNTY BUILDINGS, SHREWSBURY.
August, 1924.

GENERAL STATISTICS.

Population.—The Population of the Administrative County in 1901 was 239,783, in 1911, 246,307, and in 1921, 242,959.

The Registrar-General's estimate of the civil population of the combined Urban and Rural Districts for 1923 is 245,600. This is used for calculating all death-rates and birth-rates.

POPULATION OF THE URBAN AND RURAL DISTRICTS.

URBAN DISTRICTS.	Census population, 1921	Population at middle of 1923. as estimated by Registrar-General.	RURAL DISTRICTS.	Census population, 1921	Population at middle of 1923. as estimated by Registrar-General.
Bishop's Castle M.B. ..	1268	1269	Atcham	21978	22200
Bridgnorth M.B.	5143	5099	Bridgnorth ..	8569	8604
Church Stretton	1671	1514	Burford	1268	1258
Dawley ..	7386	7534	Chirbury ..	3193	3299
Ellesmere ..	1831	1849	Church Stretton	4516	4494
Ludlow M.B. ..	5677	5584	Cleobury Mortimer	7297	7609
Market Drayton	4710	4762	Clun	6243	6314
Newport ..	3056	3103	Drayton	7156	7292
Oakengates ..	11349	11830	Ellesmere ..	8008	8106
Oswestry M.B.	9790	9878	Ludlow	8980	8969
Shrewsbury M.B.	31013	31600	Newport ..	5747	5834
Wellington ..	8148	8073	Oswestry.. ..	16313	16620
Wem	2176	2218	Shifnal	7666*	7636
Wenlock M.B.	13712	13780	Teme	1649	1673
Whitchurch ..	5656	5607	Wellington ..	11207	11280
			Wem	8572	8626
			Whitchurch ..	2011	2086

* To this number must be added the population of the Staffordshire parishes of Blymhill and Weston administered by the Shifnal Rural District Council. The population at the 1921 Census was 689, making a total of 8355.

Marriages.—The number of marriages in the Registration County for 1923 was 1833, compared with 1879 in 1922, 2,050 in 1921, 2,440 in 1920, and 2,387 in 1919.

Births and Deaths.—The number of births and deaths and the rates, are shown in the following table for the years since 1912 :—

Year.	Births.	Deaths.	Natural Increase.
1913 ..	5245	3012	2233
1914 ..	5205	3556	1649
1915 ..	4917	3532	1385
1916 ..	4682	3231	1451
1917 ..	4059	3232	827
1918 ..	4283	3702	581
1919 ..	4264	3441	823
1920 ..	5943	2952	2991
1921 ..	5318	3000	2318
1922 ..	4904	3295	1609
1923 ..	4900	3046	1854

CAUSES OF DEATH IN ADMINISTRATIVE AREAS IN THE COUNTY OF SALOP, 1923—URBAN DISTRICTS

Causes of Death.	Shrewsbury M.B. 02		Bishop's Castle M.B. 04		Bridgnorth M.B. 05		Church Stretton U.D. 06		Dawley U.D. 07		Ellesmere U.D. 14		Ludlow M.B. 15		Market Drayton U.D. 35		Newport U.D. 16		Oakengates U.D. 17		Oswestry M.B. 24		Wellington U.D. 25		Wem U.D. 26		Wenlock. M.B. 27		Whitchurch U.D. 34		Total.		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
CIVILIANS ONLY.																																	
ALL CAUSES	203	199	12	9	25	37	8	12	48	38	15	8	45	39	35	46	20	25	73	69	73	80	46	43	10	23	75	73	48	42	736	743	
1 Enteric Fever .. ..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	2
2 Small-pox .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
3 Measles	4	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..
4 Scarlet Fever .. ..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	1	..	..	1	..	..	..	..	..	5	4
5 Whooping Cough	2	2	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	1	..	..	..	..	1	3	..	..	..	1	3
6 Diphtheria .. ..	..	..	..	..	..	..	..	..	..	1	..	..	2	..	2	..	..	..	1	..	..	..	..	..	1	3	3	..	..	..	8	7
7 Influenza	16	14	..	1	..	2	..	..	1	1	..	..	1	1	1	1	..	..	3	3	7	2	1	2	1	1	1	2	1	1	33	31
8 Encephalitis lethargica .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
9 Meningococcal meningitis .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..
10 Tuberculosis of Respiratory system	16	8	..	..	2	3	..	1	3	5	..	1	1	1	2	2	1	1	4	3	4	8	6	2	1	..	3	6	2	..	45	41
11 Other tuberculous diseases	3	5	..	..	..	1	..	..	1	..	..	..	1	2	..	..	1	1	1	..	3	2	1	2	..	..	1	3	..	..	12	17
12 Cancer, malignant disease	17	25	1	..	2	9	1	1	4	9	..	2	11	6	2	7	3	3	8	13	10	9	4	3	..	2	9	5	2	9	74	103	
13 Rheumatic Fever	1	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	3
14 Diabetes	1	1	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	1	2	..	..	..	..	..	..	..	..	..	..	..	..	..
15 Cerebral haemorrhage, &c.	11	14	1	1	1	5	..	..	2	2	..	..	2	..	2	3	1	4	2	2	2	5	6	3	..	..	2	4	4	3	36	46
16 Heart Disease	31	28	3	2	2	3	1	..	9	3	4	3	4	4	8	9	1	4	6	7	14	9	4	9	1	3	16	17	8	8	112	109	
17 Arterio-sclerosis	9	5	1	..	1	..	..	1	1	..	2	..	1	1	1	..	..	3	1	4	3	4	2	..	..	2	2	3	1	32	16	
18 Bronchitis	8	10	..	1	1	3	1	1	8	1	..	..	4	4	1	4	..	2	6	6	..	1	1	2	..	..	4	4	4	1	38	40
19 Pneumonia (all forms)	20	22	1	..	1	2	..	..	4	1	3	1	5	4	3	2	2	..	4	4	4	11	2	2	..	1	4	4	3	2	56	54
20 Other respiratory diseases	2	1	..	..	..	..	..	1	..	..	..	..	1	..	..	1	1	2	1	..	..	..	1	..	..	..	..	..	1	..	6	6
21 Ulcer of stomach or duodenum	1	2	..	1	..	..	..	..	1	..	1	..	3	..	..	..	1	..	2	1	3	..	1	..	..	..	..	1	..	..	13	5
22 Diarrhoea, &c. (under 2 years)	3	3	1	1	4	4
23 Appendicitis and typhlitis	6	3	..	..	..	..	..	1	..	..	..	..	..	..	1	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	8	5
24 Cirrhosis of liver	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	2	2
25 Acute and chronic nephritis	4	2	2	..	..	1	1	..	2	2	1	..	1	..	..	1	1	..	1	1	8	7	1	..	1	..	3	4	3	2	29	20
26 Puerperal sepsis .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
27 Other accidents and dis- eases of pregnancy and parturition .. ..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2
28 Congenital debility and mal- formation, premature birth	8	7	..	..	2	..	..	..	3	1	..	..	2	2	3	2	1	..	9	4	3	3	1	2	2	..	6	..	3	1	43	22
29 Suicide	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	1	..	..	..	..	..	..	..	7	..
30 Other deaths from violence	4	5	..	..	4	1	1	..	1	1	1	..	2	..	1	..	..	4	1	..	..	..	..	..	1	..	2	1	1	1	24	14
31 Other defined diseases	30	33	2	3	9	4	2	6	8	11	3	1	7	9	9	12	5	4	14	17	6	12	9	12	1	12	17	20	11	11	133	167	
32 Causes ill-defined or un- known	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	2	1	2	2	..	..	..	1	..	..	1	..	7	6	
33 Total Causes (included above)																																	
34 Myelitis .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
35 Encephalitis .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..
Deaths of infants under 1 year:																																	
Total	20	19	2	..	3	2	..	..	5	2	1	..	2	3	5	3	2	..	9	7	4	10	2	3	2	..	8	1	4	1	69	51
Illegitimate	4	3	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	1	..	..	..	..	..	3	..	1	..	9	5
TOTAL BIRTHS	299	328	7	4	46	34	15	9	86	82	13	8	44	58	53	41	24	34	137	135	88	101	68	74	22	17	143	124	57	55	1102	1104	
Legitimate	269	300	7	2	43	32	14	8	81	79	13	7	38	57	51	37	22	32															

CAUSES OF DEATH AT DIFFERENT PERIODS OF LIFE IN THE ADMINISTRATIVE COUNTY OF SALOP, 1923.

CAUSES OF DEATH.	Sex.	AGGREGATE OF URBAN DISTRICTS.											AGGREGATE OF RURAL DISTRICTS.										
		All Ages	0—	1—	2—	5—	15—	25—	45—	65—	75—	All Ages.	0—	1—	2—	5—	15—	25—	45—	65—	75—		
ALL CAUSES	M. F.	736 743	69 51	19 16	25 22	17 23	36 28	74 69	164 172	163 138	169 224	818 749	99 72	10 15	15 12	11 21	31 34	70 71	188 147	171 135	223 242		
1 Enteric Fever	M. F.	.. 2	.. ..	.. ..	.. ..	1 1	1 ..	.. ..	.. ..	.. ..	.. ..	1 ..	.. ..	.. ..	.. ..	.. ..	1 ..	.. ..	.. ..	.. ..	.. ..
2 Small-pox	M. F.	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..
3 Measles	M. F.	5 4	.. 1	1 1	4 1	.. 1	.. ..	.. ..	.. ..	.. ..	.. ..	2 2	.. ..	1 ..	1 1	.. 1	.. ..	.. ..	.. ..	.. ..	.. ..
4 Scarlet Fever	M. F.	1 3	.. ..	.. 1	.. 1	1 1	.. ..	.. ..	.. ..	.. ..	.. ..	2 ..	.. ..	.. ..	.. ..	1 ..	1 ..	.. ..	.. ..	.. ..	.. ..
5 Whooping Cough	M. F.	8 7	6 2	1 1	1 4	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	5 10	3 4	1 3	.. 1	1 ..	.. 2	.. ..	.. ..	.. ..	.. ..
6 Diphtheria	M. F.	.. 5	.. ..	.. ..	3 ..	2 ..	.. ..	.. ..	.. ..	.. ..	.. ..	2 5	1 ..	.. ..	.. ..	3 ..	2 ..	1 ..	.. ..	.. ..	.. ..
7 Influenza	M. F.	33 31	.. 3	1 ..	4 ..	3 ..	2 ..	3 ..	4 8	6 12	10 8	20 21	.. 1	2 ..	.. 1	.. 2	2 4	3 1	4 2	3 3	6 7	
8 Encephalitis lethargica	M. F.	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	1 1	.. ..	.. ..	.. ..	.. ..	1 ..	.. ..	1 ..	.. ..	.. ..
9 Meningococcal meningitis	M. F.	1 1	.. ..	.. ..	1 ..	.. 1	.. ..	.. ..	.. ..	.. ..	.. ..	1 ..	.. ..	.. ..	.. ..	1 ..	.. ..	.. ..	.. ..	.. ..	.. ..
10 Tuberculosis of Respiratory System	M. F.	45 41	.. ..	.. ..	1 ..	.. 2	10 13	22 15	12 9	.. 1	1 ..	40 31	.. ..	.. ..	.. ..	1 2	8 12	16 12	10 5	5 ..	.. ..	
11 Other Tuberculous Diseases	M. F.	12 17	1 2	1 1	1 2	2 1	2 3	3 6	2 1	.. 1	.. ..	15 12	1 2	2 ..	1 2	1 1	2 ..	6 4	2 2	.. ..	.. 1
12 Cancer, Malignant Disease	M. F.	74 103	.. ..	.. ..	1 ..	.. ..	1 ..	2 11	28 44	26 28	16 20	97 96	.. ..	.. ..	2 ..	1 ..	1 5	46 45	25 24	17 21	
13 Rheumatic Fever	M. F.	1 3	.. ..	.. ..	.. ..	.. 1	1 1	.. 1	.. ..	.. ..	.. ..	3 1	.. ..	.. ..	.. ..	2 1	.. ..	.. ..	1 ..	.. ..	.. ..
14 Diabetes	M. F.	6 7	.. ..	.. ..	.. ..	.. ..	1 ..	1 1	3 5	1 1	.. ..	7 5	.. ..	.. ..	.. ..	.. ..	1 ..	.. 2	2 1	1 2	3 ..
15 Cerebral Haemorrhage, &c.	M. F.	36 46	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	9 12	10 10	17 24	51 63	.. ..	.. ..	.. ..	.. ..	.. 2	.. ..	7 8	21 22	23 31
16 Heart Disease	M. F.	112 109	.. ..	.. ..	.. ..	1 2	4 2	7 7	36 30	39 31	25 37	123 126	.. ..	.. ..	.. ..	.. 3	2 1	7 6	29 23	48 36	37 57
17 Arterio-sclerosis	M. F.	32 16	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	5 3	14 2	13 11	44 21	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	7 ..	21 6	16 15
18 Bronchitis	M. F.	38 40	2 1	1 2	.. 1	.. ..	.. ..	.. ..	4 7	12 9	19 20	41 36	4 3	.. 1	.. ..	.. 1	.. ..	1 ..	3 3	5 8	28 20
19 Pneumonia (all forms)	M. F.	56 54	9 8	7 8	1 2	2 2	1 ..	9 4	10 13	8 7	9 10	35 30	6 5	1 4	3 3	1 1	2 ..	3 4	7 4	3 4	9 5		
20 Other Respiratory Diseases	M. F.	6 6	.. ..	.. ..	.. ..	.. ..	1 ..	1 1	1 1	2 2	1 2	5 10	1 2	.. ..	.. ..	.. ..	.. ..	.. ..	2 3	.. 3	2 2
21 Ulcer of Stomach or Duodenum	M. F.	13 5	.. ..	.. ..	.. ..	.. ..	1 ..	3 1	7 2	2 1	.. 1	5 4	.. ..	.. ..	.. ..	.. ..	.. ..	1 2	4 2	.. ..	.. ..
22 Diarrhoea, &c.	M. F.	7 10	3 3	1 1	.. ..	.. ..	.. 1	.. 1	1 3	.. ..	2 1	11 8	5 3	.. ..	1 ..	.. 1	.. ..	1 ..	.. 1	1 1	3 2
23 Appendicitis and Typhlitis	M. F.	8 5	.. ..	.. ..	.. ..	2 ..	1 1	2 1	2 3	1 ..	.. ..	4 5	.. ..	.. ..	.. 1	.. 1	.. 1	.. 1	3 1	1 ..	.. ..	
24 Cirrhosis of Liver	M. F.	2 2	.. ..	.. ..	.. ..	.. ..	.. ..	.. 1	1 1	1 ..	.. ..	1 1	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	1 1	.. ..	.. ..
25 Acute and Chronic Nephritis	M. F.	29 20	.. ..	.. ..	.. ..	2 ..	1 1	1 2	9 3	9 4	7 10	34 16	.. ..	.. ..	.. ..	.. ..	1 2	4 1	15 5	6 5	8 3
26 Puerpera: Sepsis	M. F.	.. 1	.. ..	.. ..	.. ..	.. ..	.. ..	1 ..	.. ..	.. ..	.. ..	.. 5	.. ..	.. ..	.. ..	.. ..	1 ..	4 ..	.. ..	.. ..	.. ..
27 Other Accidents and Diseases of Pregnancy and Parturition	M. F.	.. 2	.. ..	.. ..	.. ..	.. ..	.. 1	1 ..	.. ..	.. ..	.. ..	.. 14	.. ..	.. ..	.. ..	.. ..	3 ..	11 ..	.. ..	.. ..	.. ..
28 Congenital Debility and Malformation, Premature Birth	M. F.	43 22	40 22	.. ..	1 ..	1 ..	1 ..	.. ..	.. ..	.. ..	.. ..	60 39	60 37	.. 2	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..
29 Suicide	M. F.	7 ..	.. ..	.. ..	.. ..	.. ..	.. ..	1 ..	4 ..	1 ..	1 ..	11 5	.. ..	.. ..	.. ..	.. ..	.. ..	3 2	5 3	3 ..	.. ..	
30 Other Deaths from Violence	M. F.	24 14	1 1	.. 1	5 2	.. 2	5 ..	6 ..	3 ..	3 2	1 6	36 13	1 ..	1 2	3 1	1 1	8 ..	9 ..	10 1	2 3	1 5		
31 Other Defined Diseases	M. F.	130 161	7 8	6 ..	5 5	3 7	3 4	11 15	23 23	25 25	47 74	153 154	16 15	2 3	4 2	1 3	3 3	10 13	24 26	23 17	70 72		
32 Causes ill-defined or unknown	M. F.	7 6	.. ..	.. ..	1 ..	.. ..	1 ..	2 ..	.. 4	3 2	.. ..	9 14	1 ..	.. ..	.. ..	.. ..	.. 1	5 11	3 1	.. 1	.. 1

TABLE I.

BIRTH-RATES AND DEATH-RATES IN SANITARY DISTRICTS FOR 1923.

Urban Districts.			Birth-rates.	Death-rates.	Rural Districts.			Birth-rates.	Death-rates.
Bishop's Castle	..	..	8.6	16.5	Atcham	..	..	20.0	11.8
Bridgnorth	..	..	15.6	12.1	Bridgnorth	..	..	19.2	12.3
Church Stretton	..	..	15.8	13.2	Burford	..	..	16.7	11.1
Dawley	..	..	22.3	11.4	Chirbury	..	..	22.7	13.6
Market Drayton	..	..	19.7	17.0	Church Stretton	..	..	20.0	14.9
Ellesmere	..	..	11.3	12.4	Cleobury Mortimer	..	..	21.9	9.2
Ludlow	..	..	18.2	15.1	Clun	..	..	20.1	12.5
Newport	..	..	18.7	14.5	Drayton	..	..	20.9	14.5
Oakengates	..	..	22.9	12.0	Ellesmere	..	..	18.2	11.4
Oswestry	..	..	19.1	15.5	Ludlow	..	..	21.9	11.9
Shrewsbury	..	..	19.8	12.7	Newport	..	..	17.8	9.7
Wellington	..	..	17.5	11.0	Oswestry	..	..	22.5	13.5
Wem	..	..	17.5	14.8	Shifnal	..	..	21.4	8.7
Wenlock	..	..	19.4	10.7	Teme	..	..	20.9	9.5
Whitchurch	..	..	19.9	16.0	Wellington	..	..	18.8	11.1
					Wem	..	..	20.8	11.9
					Whitchurch	..	..	16.7	11.9
TOTAL	..	..	19.4	13.0	TOTAL	..	..	20.4	11.8

INFANT MORTALITY.

TABLE II.

COMPARISONS OF INFANTILE DEATHS FOR PERIODS OF YEARS.

	Average annual numbers for years.			Percentage decrease of numbers in		Numbers for years			
	1905—1909	1910—1914	1915—1919	second period compared with first period.	third period compared with second period.	1920	1921	1922	1923
Births	5955	5427	4441	8.8	18.1	5943	5318	4904	4900
Deaths from all causes under one year	561	444	335	20.8	24.5	395	354	288	290
Deaths from—									
Measles and									
Whooping Cough	34	22	19	35.3	13.6	24	15	8	9
Influenza .. ..	..	..	11	..	..	1	5	6	3
Other Infectious Diseases	5	1	.8	80.0	20.0	0	1	..	..
Tuberculous Diseases	19	12	5.8	36.8	51.6	12	6	7	3
Convulsions and									
Meningitis (not tuberculous) ..	60	42	..	30.0	..	..	..	..	..
Bronchitis	46	33	30.6	28.2	7.2	37	24	18	..
Pneumonia	65	43	34	33.8	20.9	40	28	28	17
Diarrhoea, Enteritis and Gastritis ..	61	52	18.6	14.7	64.2	27	28	20	..
Premature Birth, congenital defects and malformations	128	119	..	7.0	..	..	..	..	..
Atrophy, Debility and Marasmus ..	96	74	..	22.9	..	..	..	..	..

TABLE III.

AVERAGE OF THE ANNUAL INFANTILE MORTALITY FOR THE SANITARY DISTRICTS FOR THE PERIODS 1901—1906, 1907—1914, 1915—1919, AND THE RATES FOR 1920, 1921, 1922, AND 1923.

URBAN DISTRICTS.	Average for years			Percentage Increase or decrease in			RURAL DISTRICTS.	Average for years			Percentage Increase or decrease in			Rates for 1920	Rates for 1921	Rates for 1922	Rates for 1923
	1901 to 1906	1907 to 1914	1915 to 1919	Second period over first.	Third period over second.	1901 to 1906		1907 to 1914	1915 to 1919	Second period over first.	Third period over second.						
Bishop's Castle	86	100	105	+	16.3	+	Atcham	84	77	56	—	8.3	—	71	48	57	56
Bridgnorth ..	106	116	104	+	9.4	—	Bridgnorth ..	87	67	65	—	23.0	—	73	64	73	66
Church Stretton	96	99	67	+	5.1	—	Burford ..	59	68	35	+	15.2	—	34	0	0	95
Dawley ..	112	97	77	—	13.4	—	Chirbury ..	77	60	51	—	22.1	—	123	92	40	53
Ellesmere ..	103	65	74	—	36.8	+	Church Stretton	97	80	75	—	17.5	—	76	77	35	77
Ludlow ..	113	84	76	—	25.7	—	Cleobury										
Market Drayton ..	..	..	119	..	..	..	Mortimer ..	92	74	72	—	19.6	—	59	78	62	65
Newport ..	117	80	81	—	31.6	+	Clun ..	100	72	95	+	28.0	—	33	52	78	78
Oakengates ..	138	104	87	—	24.6	—	Drayton ..	115	84	77	—	26.0	—	25	60	67	71
Oswestry..	102	101	96	—	1.0	—	Ellesmere ..	92	84	73	—	8.7	—	54	37	85	67
Shrewsbury ..	126	102	74	—	19.0	—	Ludlow ..	91	69	59	—	24.2	—	81	35	81	55
Wellington ..	114	78	91	—	31.6	+	Newport ..	106	96	97	+	9.4	—	96	79	88	48
Wem ..	93	87	47	—	6.4	—	Oswestry ..	96	87	83	—	9.4	—	76	70	62	69
Wenlock ..	102	85	71	—	16.7	—	Shifnal ..	94	76	52	—	19.1	—	36	21	49	42
Whitchurch ..	103	104	82	+	1.0	—	Teme..	127	102	67	—	19.7	—	54	61	0	28
							Wellington ..	102	83	74	—	18.6	—	79	71	48	85
							Wem ..	69	67	62	—	3.0	—	68	63	95	61
							Whitchurch ..	61	58	69	—	5.0	+	76	22	62	29
All Districts ..	112	96	82	—	14.3	—	All Districts ..	93	78	69	—	16.1	—	67	57	64	63

Perhaps the most striking feature of Table III. is that rates for the combined urban districts for the years 1922 and 1923 have been considerably lower than those of the combined rural districts. Previous to 1920 the urban rates were markedly in excess of the rural. Can this change be due to the establishment of child welfare centres and more efficient system of health visiting in the urban areas? It is well not to jump to conclusions, but this seems probable.

The urban districts of Wenlock, Wellington and Newport had rates under 40, and those of Dawley, Whitchurch and Ellesmere had rates under 50.

Ignoring the rate for Bishop's Castle, which was very low in the previous three years, Market Drayton had again the highest rate amongst the urban districts of the County. A Child Welfare Centre was established in this District in June, 1923. The premises are very unsuitable, and it is hoped that shortly more suitable premises may be found and that the work will be made more effective and be linked up more closely with the other child activities in the district.

To what extent the high mortality is due to bad housing, incomplete communal services, deficient education and inherent qualities of certain parts of the population, and the administration of the Poor Law, are matters that will repay special investigation.

INFECTIOUS DISEASE.

There was nothing in the shape of a serious epidemic of infectious disease during the year, although in a few districts there was more than the usual prevalence of scarlet fever and diphtheria. The action of health authorities has in the past been directed principally against the common infectious diseases, particularly the notifiable diseases, to the exclusion of much more effective action in other directions. Many of these diseases such as typhus fever and cholera are now non-existent in this country; others, such as typhoid fever and (judged by death-rates), scarlet fever also, have been reduced to almost negligible quantities. It is true that scarlet fever, unlike typhoid fever, may, for anything we know, become prevalent and malignant again at some future time, but this does not appear likely. The death-rate from diphtheria would also be reduced almost to the vanishing point if we could ensure the injection of a sufficient dose of antitoxin at the onset of the illness. There remain the two diseases—measles and whooping cough—which are responsible directly and indirectly, for most of the deaths due to the 'common' infectious diseases.

In dealing with infectious diseases the means to be employed and the results that can be expected differ widely. Typhoid fever must be attacked principally by protecting our food and water supplies and general sanitation, and will by these means be finally eliminated. Small-pox can be absolutely controlled by vaccination and isolation. The group of diseases spread mostly by throat and nose carriers, including scarlet fever, diphtheria, cerebro-spinal fever, pneumonia, influenza and probably poliomyelitis and encephalitis lethargica, are most difficult to control. In these diseases isolation of the known case is often of little avail, because the unsuspected cases or carriers continue to spread the disease. These diseases, together with measles and whooping cough, can probably best be reduced and rendered less fatal by improving ventilation and cleanliness, by lessening overcrowding of homes, schools and workplaces, and by providing skilled health visiting and nursing in the homes.

Education of the people in the nature of infection, how it is spread, how the danger of spread can be lessened and in the general hygienic principles that should be observed when the disease is contracted, is the most hopeful way of dealing with this class of infectious disease.

Small-pox.—No case of small-pox was notified during the year. The number of unvaccinated persons in the county must now be very large, and consequently if cases of small-pox are introduced, we shall have to depend upon prompt isolation of the cases, and supervision and vaccination of contacts. Hospital isolation is provided by the County Council for all districts except the Boroughs of Shrewsbury and Wenlock, and the rural district of Teme, and all arrangements have been made for the prompt removal of patients to a hospital.

Scarlet Fever.—The amount of scarlet fever was less than in the previous year, the only districts with epidemic prevalence being the Oswestry Urban and Rural Districts. Only 122 out of 419 cases were isolated in hospital during the year.

Diphtheria.—There was no marked prevalence of diphtheria in any district in the County. The prevention of diphtheria and of mortality from diphtheria depends upon the measures taken for the discovery of overlooked cases and carriers and the prompt use of antitoxin. The arrangements for the supply of antitoxin are those detailed in previous reports. They have been circulated to the medical practitioners of the County so that they can take action without delay. When diphtheria is prevalent in a district every medical practitioner should always have with him a supply of antitoxin for immediate use. The School Medical Officers and School Nurses undertake investigations where necessary for limiting the spread of diphtheria in schools.

It is possible now, by means of the Schick Test, to find out whether any particular person is susceptible to diphtheria or not, and then it is possible to give immunity for a time by inoculation. These measures may be of great use in institutions, but so far, it has not been found practicable to apply them in this County.

MEASLES.

The prevention of the spread of Measles is almost an impossibility and we have to confine ourselves more particularly to lessening the damage done. In almost every outbreak, the spread, in the first instance, particularly in rural districts, is almost entirely from the schools. Schools have been closed extensively principally as educational measures. A recent circular of the Board of Education states that "Such closure is rarely justified on the grounds of health, while on educational grounds, it is obviously desirable that schools should remain open."

Sir George Newman, in his report for 1922, states:—

"The problem of measles is so urgent, and of such vital importance, that I think it necessary to summarise the methods to be adopted by all authorities.

"Such practical measures comprise:—

"1. *Instruction of Parents and Guardians.* Formal and informal lectures by the Medical Officer of Health or medical practitioners to those most likely to influence the public attitude to measles; instruction imparted at the Infant Welfare Centre, and other propaganda work, such as the distribution of posters, pamphlets, etc., on the disease all prove useful in instructing the public concerning measles. The practical advice of the health visitor or nurse, exemplified in a particular case in the home, will educate the parent and spread practical working knowledge more satisfactorily than any other method.

"2. *Medical Assistance.* The health visitor should be instructed to advise the calling in of a doctor in all cases of measles. Medical assistance may be provided for necessitous cases at the expense of the sanitary authority, on the advice of the Medical Officer of Health.

"3. *Health Visiting.* It should be a general instruction to Health Visitors to whom measles work is assigned that, on learning of the occurrence of a case of measles in their particular district, a visit should be made promptly to the home of the sufferer. The Health Visitor advises the parents or persons in charge as to the infectious nature of the disease and the precautions to be taken, and gives elementary instructions as to nursing where this is required. She makes enquiries

as to the existence of previous cases, or of other cases of the disease, and as to whether the School Authorities have been informed. She reports on her visit to the Medical Officer of Health; doing so immediately, if she finds conditions of environment which seem to call for action by the public health authority, or if the case is obviously one in which steps should be taken at once to secure medical treatment and nursing. If she receives no other instructions she continues her visits as required until the child is convalescent. On receipt of her report, the Medical Officer of Health decides whether it is necessary for him to communicate with the medical attendant, if any, or to make a personal visit to the house, and whether nursing or other assistance is required, and in what way it can be supplied.

“ It is not necessary, as a rule, to appoint Health Visitors solely for measles visiting. It is convenient that Health Visitors engaged in Maternity and Child Welfare visiting should also undertake the visiting of cases of measles. In periods of severe epidemics of measles it may be necessary for a local authority to employ the whole resources of its health visiting staff in measles visiting. In such times of stress, if the staff available is insufficient to allow of visits to all cases, such action should be confined to children under five years of age.

“ 4. *Nursing Provision.* This is of the first importance in preventing mortality and disablement resulting from measles. The services of nurses are not perpetually required, but it is essential that sanitary authorities should have a call on the services of nurses for home nursing whenever the need for utilising them arises.

“ Arrangements may be made for engaging the nurses of a District Nursing Association, or by employing the nurses of the sanitary authorities isolation hospital staff. Often local authorities of contiguous districts can usefully combine with the object of providing nurses who can serve a large number of smaller urban districts and rural districts, and who can be dispatched to the seat of outbreaks of measles as required. The various component authorities combining for this purpose contribute to the cost in proportion to their populations or otherwise. Another, and in some cases a more efficient and economical arrangement, is for the County Council to provide a staff of nurses for the visiting and nursing of measles and other infectious diseases, such as whooping cough, poliomyelitis, epidemic diarrhoea and ophthalmia neonatorum in children under five years of age throughout the county. This provision can be made by the County Councils exercising their powers under the Maternity and Child Welfare Act, 1918. The direct employment of these nurses by the County Council for the benefit of the whole administrative county simplifies the financial arrangements, since the County can be rated equally for the salaries, and no charge need be made for their services to the particular local authorities who use them.

“ With regard to Health Visitors and nurses undertaking visits to the homes of cases of measles while engaged also on other branches of work, the Ministry are advised that subject to the taking of simple precautions, on the advice of the Medical Officer of Health, there is little or no risk of the conveyance of infection from house to house.

“ It is naturally of the utmost importance that health visitors and nurses employed by the local authorities in visiting and nursing cases of measles should not only be fully acquainted with the principles which govern the work but should know how in practice to make the best of unsatisfactory conditions of environment in the interest of the sick child and the family.

" 5. *Institutional Treatment.* Although the majority of cases must necessarily be treated at home, yet cases occur where, for one or another reason, hospital treatment is specially desirable, and provision should be made for such cases. Institutional treatment in measles is specially valuable for severe or necessitous cases coming from bad home surroundings, whose prospect of recovery may be improved by hospital treatment; and on account of the provision made in institutions for the prevention of complications and sequelæ of the disease.

" The Local Government Board issued orders in 1911 enabling the managers of the Metropolitan Asylums Board to receive patients suffering from measles into their hospitals under certain conditions. At present, admission is restricted to very severe cases and to children of the poorest class, who cannot receive proper attention at their homes. The cases are recommended for admission by Medical Officers of Health and Poor Law Medical Officers. In certain large urban centres in England and Wales, some hospital provision for necessitous cases has been made, but the provision is generally inadequate for the needs of the population. In other cases it is entirely lacking. The provision of numerous small wards, containing only a few patients, which allow of successive cleansing of each ward, together with prompt isolation of a case of bronchial pneumonia, are calculated to secure favourable results in hospital treatment. The adoption of such measures in France has proved efficacious in checking mortality from the disease.

" 6. *Convalescent Home Treatment.* For children who have recently passed through an attack of measles a certain period of treatment in a convalescent home is often specially important for complete recovery.

" It is desirable, therefore, that local authorities should either themselves or through a voluntary agency, arrange for beds in convalescent homes for children convalescent from measles. The selection of suitable cases can be entrusted to the Medical Officer of Health.

" 7. *After-care.* The Health Visitor should keep under review children who have recently suffered from measles. The disease is often followed by a more or less prolonged period of ill-health which can be ameliorated by good home conditions, suitable food, fresh air and so forth. Special medical observations of these cases, *e.g.*, at the Child Welfare Centre, or at a School Clinic, seems desirable for some months in order that if sequelæ arise the child may promptly receive the benefit of expert advice.

" 8. *Measles in Institutions.* The risk of measles should always be kept in mind in connection with day nurseries, crèches and other institutions for children. The authorities of such institutions should consult the Medical Officer of Health, or the Medical Officer in attendance at the institution on all cases of suspected infectious disease arising in the institution at ordinary times, and with regard to all children presenting themselves for admission during the prevalence of a measles epidemic.

" 9. *Grants for Measles Work.* In aid of the provision for Maternity and Child Welfare, the complete regulations for which are set forth in the Local Government Board's circular of 9th August, 1918 (M. & C. W. 4), and the Ministry's circular of 15th July, 1919 (Circular No. 5. M. & C. W. 11), grants not exceeding one-half of approved net expenditure are payable by the Ministry during each financial year, commencing 1st April, in respect of the following services for measles in the case of children under five years of age:—

- “(1) The salaries and expenses of Health Visitors engaged in Maternity and Child Welfare work (including the home visiting of cases of measles).
- “(2) Home nursing of cases of measles.
- “(3) The provision of hospital beds for measles occurring in children under five years of age, either permanent or temporary in character, provided either at a hospital for infectious diseases, or in a separate institution. If this provision is made at a local authority's hospital for infectious diseases it must be arranged so as not to interfere with the accommodation for the other infectious diseases which are usually admitted to hospital.
- “(4) The provision of accommodation in convalescent homes for children under five years of age.

“It is desirable that Local Authorities should, either themselves or through a voluntary agency, arrange for beds in convalescent homes to be available for children requiring such treatment after measles. As a general rule grants will be paid in the case of voluntary agencies providing convalescent homes for this purpose only in respect of accommodation provided in connection with a local authority's scheme and approved by the local authority and the Ministry.

“10. *Notification.* The withdrawal of the Order of 1915 does not preclude any local authority which is satisfied that notification is a useful adjunct to measles work from continuing notification. The Ministry are willing to consider an application from any Sanitary Authority for an Order on the lines of the Order of 27th November, 1915, making the compulsory Notification of Measles and German Measles applicable to cases of these diseases occurring in their district, provided that any Sanitary Authority so applying possesses, and is prepared to utilise a satisfactory organisation for dealing with cases of measles; in the absence of sufficient evidence in these respects it is obvious that very little useful purpose would be served by the Order, and that it, therefore, could not be justified.

“When reason is shown, the Ministry are prepared to consider a local Order which would require compulsory notification for *all* cases of measles occurring in the district, not merely the first cases as in the Order of 1915.”

This summary has been repeated at length, as I look upon it as very important and requiring careful consideration. That part dealing with the routine work of the Medical Officers and Health Visitors will be kept in type and printed for their use.

Typhoid Fever.—The following remarks appeared in my report for last year:—“This disease is now a comparatively rare disease in the County, and the origin of the few cases that do arise is generally obscure. It seems most desirable that every case should be very carefully inquired into, in order to determine its origin and the probable mode of transmission. Like most other infectious diseases, investigation seems to show that cases are spread by direct personal infection, except in those cases where infected food or water has been consumed. The first step should in every case be to get confirmatory diagnosis by means of a blood test. Although this test should not of itself be considered as decisive, a positive result is almost certain evidence, and a negative result is often the starting point for further examination and a revision of the diagnosis. It is advisable also to get a blood test of all other members of the household, of any persons brought into intimate household contact with the patient and of any persons in the immediate neighbourhood who have suffered from suspicious symptoms. I have previously advocated that the excreta of the patient should be examined bacteriologically before the patient and the house is declared free from infection.”

In addition to personal infection, typhoid fever is spread by means of water and food. The only district in which typhoid fever has been traced to water in recent years is the Borough of Bridgnorth. Since 1917 the river water supply to Bridgnorth has been chlorinated and the danger has been greatly reduced, but the intake from the river is still in dangerous proximity to the outfall from the sewage works and a short distance below a dangerous pollution, and neither efficient filter beds nor storage have been provided. These matters should receive early consideration, and the removal of the intake should be carried out forthwith. The foods that have been proved to carry the infection of typhoid fever are shell-fish, milk, ice-cream, and water cress. Of these, shell-fish—mostly oysters and mussels—are infinitely the most important, but fortunately the consumption of shell-fish in this county is small. Careful inquiry into the source of milk is made in every outbreak and into the consumption or otherwise of ice-cream. The infection in ice-cream is not due to infection in the original milk, but to infection during careless preparation. It is stated that ungutted immature plaice are also a source of spread of typhoid fever. As such fish are usually satisfactorily cooked, the infective organisms should barely escape destruction.

Seventeen cases of typhoid fever were reported :—

Week of Notifica- tion.	Sanitary District.	Age.	Widal's Reaction.	Suspected source of infection.	Number in household.	Widal's Tests of other members of household.	Widal's Tests of other contacts.	Bacterio- logical examina- tion of excreta for freedom. (9)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Sept. 1	Bridgnorth Urban ..	35	Typhoid +	Possible carrier	4	none	none	Yes
Oct. 13	do.	10	do.	Unknown, possibly contracted outside Borough.	3	One	..	Died.
April 21	Wem Rural	18	Paratyphoid +	Not traced.	4	Not taken.	Not taken.	No
Oct. 20	do.	42	Typhoid +	do.	5	do.	do.	
Nov. 10	do.	25	Typhoid +	do.	5	do.	do.	
Nov. 24	do.	48	Paratyphoid +	do.	6	do.	do.	
Feb. 10	Oswestry Urban ..	21	Paratyphoid +	Carriers	3	Negative	3	Died.
May 26	Wellington Rural ..	17	Typhoid +	Not traced.	6	No	No	No
April 14	Newport Urban ..	53	do.	do.	4	No	No	No
June 19	Wellington Urban ..	35	do.	do.	4	No	No	No
Jan. 13	Atcham	35	do.	Probably carriers	These cases arose in Salop Mental Hospital and were the subject of investigation amongst the staff and patients.	..	..	Yes
Mar. 17	do.	34	Paratyphoid +	Infected from first case.		..	..	Yes
do.	do.	40	do.	do.		..	..	Yes
do.	do.	22	do.	do.		..	..	Yes
do.	do.	42	do.	do.		..	..	Yes
June 30	Whitchurch Urban	4	do.	Obscure	17	Nil	Nil	Nil
Dec. 22	do.	8	do.	do.	5	do.	do.	do.

Encephalitis Lethargica.—Six cases were notified. There was no obvious connection between any of them, and in fact, there was not more than one case in any sanitary district.

Acute Poliomyelitis.—Only one case of this disease was notified. Unfortunately, as is explained in another part of the report, the majority of the cases of this disease are overlooked, and are only discovered later owing to paralysis.

RURAL DISTRICTS.	Population Census 1921	SCARLET FEVER.	DIPHTHERIA (including Membranous Croup).	Enteric (Typhoid and Para- typhoid Fever).	PNEUMONIA.	PUERPERAL FEVER.	CEREBRO-SPINAL FEVER.	ACUTE POLIOMYELITIS.	ACUTE POLIO-ENCEPHALITIS.	ENCEPHALITIS LETHARGICA.	DYSENTERY.	OPHTHALMIA NEONATORUM.	ERYSIPELAS.	TUBERCU- LOSIS.		MALARIA.	CHICKEN-POX.
														RESPIRATORY.	OTHER FORMS.		
Atcham ..	21978	24	17	5	11	1	..	..	..	..	..	2	7	26	7	..	..
Bridgnorth ..	8569	5	6	..	4	..	..	..	..	..	..	..	2	11	1	..	..
Burford ..	1268	..	..	..	1	..	..	..	..	..	..	..	1	..	1	..	..
Chirbury ..	3193	..	..	..	5	..	..	..	..	..	..	2	..	..	1	..	..
Church Stretton ..	4516	2	..	..	1	..	..	..	..	..	..	1	..	2	1	..	..
Cleobury Mortimer ..	7297	5	7	..	..	..	..	..	..	..	..	2	..	11	3	..	..
Clun ..	6243	8	3	..	2	..	..	..	..	..	..	..	3	6	2	..	..
Drayton ..	7156	8	2	..	3	..	..	..	..	..	..	..	..	3	3	..	..
Ellesmere ..	8008	19	7	..	2	1	..	..	..	..	..	..	4	1	4	..	..
Ludlow ..	8980	4	7	..	10	..	1	..	..	1	..	2	2	12	6	..	..
Newport ..	5747	14	11	..	2	1	..	..	..	..	..	..	1	6	3	..	..
Oswestry ..	16313	69	16	..	1	2	..	1	..	..	..	11	3	20	9	..	..
Shifnal ..	7666	5	1	..	..	..	..	..	..	1	..	..	..	10	6	..	..
Teme ..	1649	7	..	..	1	..	..	..	..	..	..	..	..	2	..	..	..
Wellington ..	11207	34	6	1	11	..	..	1	..	1	..	..	2	19	7	1	..
Wem ..	8572	10	2	4	5	..	..	..	..	..	..	6	..	6	2	..	..
Whitchurch ..	2011	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..
URBAN DISTRICTS.																	
Bishop's Castle ..	1268	..	..	..	..	..	..	..	..	..	..	..	..	3	..	..	..
Bridgnorth ..	5143	5	4	2	3	..	..	..	..	..	..	..	..	7	2	..	..
Church Stretton ..	1671	1	23	..	..	..	..	..	..	..	..	..	..	1	..	..	..
Dawley ..	7386	12	..	..	1	..	..	..	..	1	..	1	..	14	7	1	..
Ellesmere ..	1831	1	..	..	..	1	..	..	..	..	..	..	..	3	1	..	..
Ludlow ..	5677	9	17	..	1	1	..	..	..	..	..	3	..	7	2	..	..
Market Drayton ..	4710	5	12	..	1	..	..	..	..	..	..	..	1	4	3	..	..
Newport ..	3056	6	2	1	12	1	2	..	..	..	..	2	3	7	4	..	..
Oakengates ..	11349	22	2	..	1	..	..	..	..	..	..	1	3	10	7	..	..
Oswestry ..	9790	68	5	1	..	1	..	..	..	..	..	3	2	16	11	..	1
Shrewsbury ..	31013	44	11	..	43	3	..	..	..	..	..	3	12	33	22	..	..
Wellington ..	8148	2	7	1	8	1	..	..	..	1	..	1	1	15	7	..	..
Wem ..	2176	13	..	..	..	2	..	..	..	..	..	1	..	1	1	..	..
Wenlock ..	13712	10	2	..	2	..	..	1	..	..	..	7	..	11	4	..	..
Whitchurch ..	5656	1	20	2	..	1	..	..	..	..	..	..	2	4	5	..	..
TOTAL ..	242959	419	187	17	131	16	3	1	2	6	6	49	52	276	133	2	1

MATERNITY AND CHILD WELFARE.

The provision made for carrying out this work and the general activities of the Child Welfare Committee have not been added to during the year, and come under the following headings :—

- (1) The administration of the Notification of Births Act.
- (2) The provision for medical, health visiting, and nursing services, including the nursing of measles, whooping cough, pneumonia, and ophthalmia neonatorum.
- (3) The provision of maternity and child welfare centres.
- (4) The provision of orthopaedic treatment for children under five years of age.
- (5) The provision of a home for ailing babies.
- (6) The provision of maternity beds.
- (7) The promotion of a midwifery service throughout the County.
- (8) The provision of medical attendance when a midwife finds medical help necessary.
- (9) The supply of milk to nursing and expectant mothers, and children under three years of age.
- (10) The institutional treatment of the expectant mother suffering from venereal disease.*
- (11) The payment for beds for unmarried mothers and their infants at existing hostels.
- (12) Arrangements with the Shrewsbury Eye Hospital for treatment of defects of the eye, ear, throat, and nose.
- (13) The provision of a lecturer on hygiene, who is available for lecturing on child welfare.

Health Visiting Service.—The health of the rising generation depends greatly upon the efficiency of the health visiting service. Of all the maternity and child welfare activities, this is by far the most important. It is also the least efficient in the training of its members, and in the number in the service compared with the difficulty, importance and amount of the work to be done.

It cannot be too strongly and constantly asserted that the only way to improve the health of a nation is by improving the conditions—principally food, exercise, fresh air and sunshine—under which the people live. It cannot be done by attention to the defective children (however necessary this may be), whether these are crippling conditions or tuberculosis, or other diseases. We should therefore concentrate upon improving our health visiting service, bringing its numbers up to the numbers in the original scheme, and giving greater facilities for them to keep abreast of modern developments of knowledge.

No greater economy can be effected than this. It strikes at the very root of disease by improving the general health of the community and by detecting deviations from normal in the early and easily curable stages.

Reference should be made to the paragraph on sunshine, food, exercise and fresh air, in order to appreciate what a wonderful scope a health visitor has as an educator, if properly equipped.

The future of child welfare depends, therefore, very largely upon the training, salary and status of the health visitor and district nurse midwife.

Although I consider the work of Health Visitors in the homes to be the most important part of child welfare, I have been much impressed with the value of "collective teaching" and the creation of a "receptive atmosphere." This depends to a great extent upon the work of centres.

* This comes under the scheme for the Prevention and Treatment of Venereal Disease.

Notification of deaths under one year and deaths after confinement.—The County Council is the authority that is primarily responsible for the health of the infant, and it is most essential for the proper carrying out of this work and for finding out faults in the procedure, that the Public Health Department should have prompt records of deaths of infants. This is merely a matter of arrangement with the registrars, who would be paid the usual fees.

It is also important that the Department should have notification of all deaths of the mother within one month of confinement. This is not a matter that can be arranged through the Registrars, as it would necessitate some alteration in the law making it obligatory for the medical attendants to state on the death certificate the date of confinement where confinement has taken place within one month of death.

Notification of Births Act, 1907. In 1923 the births notified and discovered were 105 less than those registered; in 1922 they were 178 less than those registered.

Notification of Births in the year 1923 :—

Total births registered (exclusive of the Borough of Shrewsbury)	4273
Notification of births by midwives	3329
" " medical practitioners	679
" " parents or other persons	8
Total notified	4016
Discovered by Health Visitors	11
Obtained from Registrar's Returns	141
	4168
Excess of Births registered over Births notified or discovered	105

In the Borough of Shrewsbury, 650 notifications were received, of which 481 were sent in by midwives, 19 by doctors, 128 were sent in by doctors and midwives, 12 by parents and 10 by Registrars.

Medical and Health Visiting Services.—There are five medical officers undertaking school and maternity and child welfare work. Their duties consist of attending the Maternity and Child Welfare Centres and exercising a general supervision over the work of the health visitors. One of them is the Medical Officer to the Babies Home, Wellington. It is estimated that this work occupies about one-quarter of their time.

There are twelve whole-time health visitors. All these health visitors are now employed on maternity and child welfare, measles, ophthalmia, tuberculosis, and mental deficiency work, and 10 out of the 12 also do some school nursing.

In addition, there are 62 district nurses acting as part-time health visitors.

The scheme is not yet fully developed, and the amount of visiting is not up to the standard originally fixed by the Ministry of Health.

In 1923 the visits paid by the Health Visitors were :—

		Under one year.				1 to 5 years.	Total.
		1st	2nd	3rd	Subsequent.		
Whole-time	..	2,841	2,475	2,449	6,200	13,324	27,289
Part-time	..	1,352	1,415	1,520	3,912	7,905	16,104
		4,193	3,890	3,969	10,112	21,229	43,393

and visits to expectant mothers numbered 4,197.

The visits paid to measles houses and the cases dealt with were :—

Houses visited.	Cases visited.	Cases without Doctor.	Cases doctor advised.
569	1026	291	30

The visits by health visitors to cases of tuberculosis are given on page 31.

One of the criteria of the efficiency of a health visiting service is the proportion of infants that are naturally fed. The following very important rule was incorporated in the rules of the Central Midwives Board in the year 1919 :—

“A Midwife must forthwith notify the Local Supervising Authority of each case in which it is proposed to substitute artificial feeding for breast feeding.”

Inquiry is made into these cases and advice and pressure is brought to bear on the midwife and mother to continue natural feeding where this is possible. During the year 73 notifications were received under this rule. The causes given for ceasing natural feeding were :—

Mother.

Illness of mother	23
Death of mother	3
Insufficiency or absence of Milk	26
Refusal to Breast Feed	11
Depressed nipples	6

Baby.

Malformation of mouth	1
Delicate weakly Babies	3

Percentage of children at first visit of health visitor on—

	Breast feeding.	Artificial feeding.	Mixed feeding.
1918	82.5	13.5	3.8
1919	85.8	9.7	4.4
1920	84.0	11.9	3.9
1921	86.6	9.6	3.7
1922	85.6	11.0	3.2
1923	88.7	8.4	2.7

Of the cases where the children were breast-fed on the first visit and the feeding was recorded after three months and six months, it was found that 79.8 per cent. were still breast-fed after three months and 71.6 per cent. after six months.

It is to the credit of the district nurses concerned that in the following districts there were no artificially-fed infants at the first visit :—Acton Scott, Hope Bowdler, and Eaton-under-Heywood ; Baschurch ; Condover ; Cound ; Hope and Shelve ; Montford ; Shrawardine and Great Ness ; Newport and District ; Richards Castle ; Ruyton-xi-Towns, and Little Ness ; Shavington, Calverhall, and Ightfield ; Stockton, Norton, and Sutton Maddock ; The Bog Mine, and District.

In the following districts the percentage of artificially-fed children was 25 per cent. or over :—Bedstone and Bucknell ; Clunbury and Clunton ; Edstaston and Coton ; Lydbury North ; Prees ; Shawbury, Moreton Corbet ; and Lee Brockhurst.

The long-tube bottle—a most insanitary method of feeding—is disappearing, and was only found in 26 cases. The use of the dummy was recorded in 613 cases—probably a considerable under statement.

The following insanitary conditions were reported by the health visitors and forwarded to the Sanitary Authorities for their attention. This is a branch of work for which the health visitor has no special training.

Water Supply.	Want of Ventilation.	Uncleanliness.	Dampness.	Overcrowding.	Nuisances.
22	129	135	86	89	22

Maternity and Child Welfare Centres.—During the year a Centre was opened at Market Drayton, and since the commencement of this year professional services have been supplied to a Centre at Church Stretton. In addition to these Centres, there is one at Shifnal for which the County Council is in no way responsible.

ATTENDANCES AT MATERNITY AND CHILD WELFARE CENTRES FOR THE YEAR 1923.

	INFANTS.						EXPECTANT MOTHERS.		
	Under 1 year.			Between 1 and 5 years.					
	New Cases.	Total Cases.	Total Attendances.	New Cases.	Total Cases.	Total Attendances.	New Cases.	Total Cases.	Total Attendances.
Wellington	165	179	677	177	358	2596	65	71	274
Bridgnorth	66	135	532	34	63	1209	12	16	82
Ironbridge	146	200	1755	40	230	2330	43	50	270
Oakengates	136	294	1207	86	269	1140	46	51	213
Oswestry	111	178	823	19	108	617	17	21	89
Whitchurch	56	108	955	36	132	1129	19	29	149
Ludlow	52	65	437	57	143	860	12	12	98
Ellesmere	11	20	191	4	25	152	4	4	343
Newport	64	83	484	13	28	413	6	6	6
Market Drayton	80	80	416	230	230	993	11	11	26
TOTALS ..	887	1342	7477	696	1586	11439	235	271	1550

Addresses at the Centres.—Addresses were given on the following subjects at the Centres:—Breast Feeding, and the Diet of a Nursing Mother; Care of the Expectant Mother; Importance of Nose Breathing in Infants; Dangers to Children; Common Colds; Ordinary Diet; Cleaning of a Baby's Mouth; Squint; The Necessity of Suitable and Sufficient Food for Expectant Mothers; Prevention of Dental Caries; Clothing; Demonstration on making Cocoa; Rickets, the Value of Fresh Air and Sunshine; Influenza; Evils of Castor Oil; Evils of Castor Oil and Dangers of Patent Medicines; Exercises for Baby; Washing and Dressing a Baby; Talk on the General Care and Management of Babies; How to keep Milk Cool in Summer; Constipation; Food Values; Feeding of Children from 1 to 5 years; Diet, Exercise, and General Hygiene of Mother during Pregnancy; The Dangerous Habits of the Dummy Teat, and Formation of Good Habits; The Importance of Leaving Well Alone; Popular Fallacies with regard to Breast Feeding; Mouth Breathing and Adenoids; Personal Cleanliness; Weaning; Common Causes of Constipation in Infants; The Importance of Regular Habits in Children; The Value of Fresh Air and Sunshine in the Home; The Use of Ante-Natal and Post-Natal Centres; Cancer; Sleep—Cots and Cradles; Bathing Babies; Diarrhoea; Measles and Whooping Cough; Convulsions; Lemons *versus* Bananas; Impetigo; Cleanliness in Artificial Feeding; Danger of the Stuff Room; The Causes of Loss of Weight; Danger of the House Fly; The Evils of too much Sugar for Babies; Common Ailments, Discipline; Poultices, Fomentations, and Simple Dressings, etc.; Vaccination; The Importance of Water Drinking.

Centre.	Addresses given by							Total.	Average Attendance	
BRIDGNORTH	Dr. Taylor	4	11	
				Miss O'Connell.	..	..	..	15
<hr/>										
ELLESMERE	Miss Bindloss	1	12	
<hr/>										
IRONBRIDGE	Dr. Symons	6	13	
				Miss Morgan	..	..	..	17
				Miss Thomas	..	..	..	7
<hr/>										
LUDLOW	Dr. Blake	6	9	
				Mrs. Higgins	..	..	..	8
				Miss Joyce ..	..	..	..	6
				Nurse Good	..	..	..	1
<hr/>										
MARKET DRAYTON	Dr. Priestley	2	12	
				Miss Thomas	..	..	..	9
				Miss Jones ..	..	..	..	2
<hr/>										
NEWPORT	Dr. Priestley	2	10	
				Miss Brazendale	..	..	..	3
<hr/>										
OAKENGATES	Dr. Priestley	6	20	
				Miss Jones ..	..	..	..	17
				Miss Thomas	..	..	..	1
				Nurse Brown, Shifnal	..	..	..	1
<hr/>										
OSWESTRY	Dr. Taylor	9	13	
				Dr. Wilson Evans	..	..	..	5
				Miss Gorick	..	..	..	10
				Miss Bindloss	..	..	..	1
				Miss S. E. Griffiths	..	..	..	3
				Lecturer from Cadbury's	..	..	..	1
<hr/>										
WELLINGTON	Dr. Symons	8	20	
				Miss Thomas	..	..	..	20
				Miss Browne	..	..	..	7
				Miss Greenhalgh	..	..	..	1
				Mrs. Woodhouse	..	..	..	1
				Miss Simpson	..	..	..	2
Nurse Higley	1						
<hr/>										
WHITCHURCH	Dr. Taylor	13	13	
				Mrs. Lowrance	..	..	..	23
				Mrs. Hart ..	..	..	..	1
<hr/>								Total addresses	..	220

County Home for Ailing Babies.—The County Council works through a local committee which includes representatives from the Public Health Committee and the County Medical Officer of Health. A monthly report including a complete financial statement is furnished to the County Council.

The number of cases in 1923 were :—

Admitted 48, Discharged 48 ; Died 1.

The cases were diagnosed on admission as :—

Malnutrition 29 ; prematurity 1 ; marasmus 2 ; improper feeding 11 ; chronic diarrhoea 1 ; inanition 1 ; scurvy 1 ; rickets 2. One healthy baby was taken in with the wet nurse.

Of the 48 infants discharged, 41 were reported as in good health, 3 as improved, and 4 no improvement.

The death was due to —prematurity—streptococcal endocarditis.

The success of the Home depends more than anything upon the selection of the proper cases for admission, and this to a great extent rests with the Medical Officers of the Clinics and the Health Visitors throughout the County, in consultation with the medical practitioner, if there is one in attendance.

As previously stated, the efficiency of the Home has been greatly increased by two factors (1) the infants are treated now almost entirely in the open air, with most beneficial results, and with an almost complete cessation of cross infections, (2) whenever practicable a wet nurse is provided to supply a certain amount of natural food to as many infants as possible.

The following extracts are taken from the report of Dr. A. D. Symons, the Medical Superintendent of the Home for Ailing Babies.

“The value of the stimulating properties of fresh air and sunlight, both from the preventive and curative aspects, has again been demonstrated, not only by its effect on debilitated babies, but also by the fact that the nursing staff have withstood a severe winter under very trying circumstances, without succumbing to the Influenza epidemic or other diseases.

“There has been one case of infectious disease only, during the year, that of a baby who was incubating German measles on admission.

“Two wet nurses have been employed, and during the forty-one weeks of their residence, 264 pints of breast-milk have been expressed. This works out at about 6½ pints a week.

“It is interesting to note that their own babies, whom they feed in addition, were both above the average in weight and nutrition.

“Useful work has been done in conjunction with the Tuberculosis Officers.

“We have admitted several newly-born babies whose mothers were suffering from Pulmonary Tuberculosis, and when possible these babies are kept in for several months to give them a good start and a fair chance of resisting infection if and when they have to return to an infected home.

“While this institution undoubtedly serves a very useful purpose, it is to be hoped that in the near future, child welfare activities will be also directed towards that great damage age—the pre-school age—when the young child having weathered the first year of life, has to contend with a variety of solid foodstuffs usually of a wrong type, and as a consequence suffers from indigestion and resultant malnutrition.

“A Home, similar to this one, which would provide sun, fresh air, exercise, and a balanced dietary would be a useful adjunct to Child Welfare Centres.”

Orthopaedic Scheme.

This consists (1) of a central hospital at Park Hall, Oswestry, (2) after-care centres at Ludlow, Oakengates, Craven Arms, Oswestry, Cleobury Mortimer, Shrewsbury, Market Drayton, Wellington, Whitchurch, Wem, Ellesmere, Ironbridge, Shifnal, Bridgnorth, Newport, and (3) the assistance of all the health visitors and medical officers in the county for discovery of the cases.

The after-care centres are visited weekly by specially trained nurses from the Shropshire Orthopaedic Hospital and they are also visited by a Medical Officer of the Hospital periodically.

It is our constant endeavour to link up this after-care work as closely as possible with the child welfare and school work. The early discovery of the cases depends almost entirely upon the health visitor as regards children under five, and largely on the School Medical Officers as regards school children. Arrangements are being made so that the Orthopaedic and Child Welfare Centres shall always be on the same day. By this means the Child Welfare and School Medical Officers, and the Health Visitors should keep in close touch with this work.

TREATMENT AT THE SHROPSHIRE ORTHOPAEDIC HOSPITAL.

Disease.	Cases paid for by the County Council.			Cases not paid for by the County Council.		
	Child Welfare, Tuberculosis and School Cases.			Child Welfare, Tuberculosis School and other Cases.		
	Under 5	5 to 14	Over 14	Under 5	5 to 14	Over 14
Tuberculosis of Bones and Joints ..	12	30	53	..	1	4
Tuberculous Peritonitis .. ..	..	1	..	..	..	..
Poliomyelitis	4	12	..	1	5	2
Rickets	14	3	..	1	..	..
Knock Knee .. ..	..	1	..	..	..	..
Scoliosis .. ..	..	6	..	..	2	9
Kypho-Lordosis .. ..	..	2	..	..	1	1
Congenital Deformities	2	..	..	..	..	..
Flat Foot .. ..	..	2	..	1	1	3
Club Foot and Claw Foot	2	7	..	1	2	4
Osteo-Arthritis .. ..	..	..	..	..	..	1
Osteomyelitis	1	..	..	..	..	3
Osteo-chondritis .. ..	..	2	..	..	..	..
Epiphysitis .. ..	..	1	..	..	..	..
Arthritis .. ..	..	1	..	..	1	4
Spastic Paraplegia	2	3	..	1	..	..
Other Paralysis	1	4	..	..	3	1
Fractures and Dislocations	3	3	..	..	3	9
Functional Foot .. ..	..	..	..	..	..	1
Torticollis .. ..	..	2	..	..	..	1
Hammer Toes .. ..	..	1	..	..	..	..
Round Shoulders and Flat Feet .. ..	..	1	..	..	..	..
Fibro lipoma of back .. ..	..	1	..	..	..	..
Periostitis .. ..	..	..	..	..	..	1
Other Accidents .. ..	..	1	..	..	1	7
Other Diseases	2	2	..	..	..	7
	43	86*	53	5	20†	58
		182			83	

Total 265

* Includes 5 Shrewsbury School Children.

† Includes 8 Shrewsbury School Children.

The importance of early treatment in Poliomyelitis is so great that arrangements have been made for a specially trained nurse to be sent, on receipt of a wire, to help the medical practitioner and afterwards to get the patient to hospital if necessary.

Unfortunately a very small proportion of these cases of poliomyelitis is notified, the remainder being overlooked until later when paralysis or weakness is noticed. Only one case was notified during the year.

Analysing this table it will be seen that of the cases paid for by the County Council 96 were due to tuberculosis and were dealt with under that scheme; 31 were non-tuberculous children under five years, and were dealt with under the Maternity and Child Welfare Scheme; and 55 were non-tuberculous school children and were dealt with under the scheme for the treatment of school children.

The average number of beds occupied by the three groups were—

	1923	1922	1921	1920
Tuberculosis ..	37	42	44	37
Child Welfare ..	6	8	10	14
School	11	11	21	23

It is interesting to compare the average number of beds occupied for the last few years. This comparison appears to show that we are materially reducing the number of children requiring orthopaedic treatment.

The diminution, which is very gratifying, particularly when it is remembered that the scheme is dealing more completely than ever with the cases in the County, is due to the lessening of the number of cases by prevention and early treatment, and to the greater efficiency of the after-care scheme.

Analysis of cases according to causation :—

101 or 38.1 per cent. were due to tuberculosis.

24 „ 9.0 „ „ poliomyelitis.

17 „ 6.4 „ „ rickets.

14 „ 5.2 „ „ congenital deformities.

42 „ 15.8 „ „ other deformities—postural or of doubtful causation.

12 „ 4.5 „ „ injuries and diseases arising at birth.

17 „ 6.4 „ „ infections other than tuberculosis.*

38 „ 14.3 „ „ other accidents and diseases.

* Includes Rheumatoid Arthritis, Osteo-Arthritis and Osteo-Chondritis.

This classification of cases in accordance with causation is extremely instructive. Tuberculosis, rickets, postural deformities and infections other than tubercular must be looked upon as eventually preventable, and most of the conditions here mentioned are comparatively easily cured if got under treatment at the very beginning of the disease. This particularly applies to poliomyelitis, rickets, congenital deformities, and to a considerable extent it applies to cases of tuberculosis. Some of the paralytic conditions arising from child-birth are possibly also preventable. A systematic inquiry into these cases would well repay the trouble.

Many of the tuberculous cases come under notice after considerable damage has been done, the cause of the trouble not being recognised in the early stages.

The Maternity Home provided by the Shrewsbury Victoria Nursing Association is now providing some accommodation for the County and Borough under an agreement the terms of which were set out in the Annual Report for 1921.

Maternity Beds at the Lady Forester Hospitals, Broseley and Much Wenlock.—There are six maternity beds at Broseley hospital and four beds at Much Wenlock hospital. Occasionally other beds have been used. The County Council have agreed to pay £1 is. a week towards the cost of any case recommended by them, that cannot afford the fee.

One hundred and fourteen cases were received during the year 1923, and were admitted from the Borough of Wenlock—Ironbridge, Broseley, Madeley, Coalport, Coalbrookdale, Benthall, Much Wenlock; outside the Borough—Bridgnorth, Church Stretton, Wellington, Horsehay, Dawley, Leighton, Oakengates, Munslow, Harley and Leebotwood.

Maternity Beds at Newport Nursing Home.—Two beds are always available here. The County Council pays an annual fee of £10 per bed towards their maintenance.

Twenty-four cases were admitted in 1923, 14 from Newport, 2 from Lilleshall, 1 from Hinstock, 1 from Wellington, 1 from Oakengates, 1 from Admaston, 1 from Chetwynd, 1 from Sheriffhales, 1 from Brewood, and 1 from Edgmond.

During 1923, two associations were formed, viz. :—Hopton Wafers and District and Munslow and District. Since the end of 1923, two more associations have been formed.

The following statement showing the parishes most urgently needing midwives, grouped in 26 districts was first published in the year 1916. The associations formed since 1916 are also shown and the date of formation. When only part of the district has been supplied, the name of the parish supplied is printed in italics, and additional portions not in the districts originally suggested are put in brackets :—

	Association formed
1.—Albrighton, Astley, Battlefield and St. Alkmond	—
2.—Westbury and Wollaston	1920
3.— <i>Church Pulverbatch</i> and Smethcott (<i>Longden</i>).	1920
4.—†Morville, Upton Cressett, Aston Eyre, Tasley and Astley Abbots	—
5.—†Chelmarsh, Eardington and Oldbury	—
6.—Chetton, Middleton Scriven, Deuxhill, Glazeley, Billingsley and Sidbury	1922
7.—Wistanstow, Sibdon Carwood, and Halford Ecclesiastical Parish	1917
8.—Stottesdon	—
9.—Kinlet	—
10.— <i>Hopton Wafers, Part of Cleobury Parish, Farlow, Part of Cleeton St. Mary, and</i> <i>Part of Silvington</i>	1923
11.—Clun	—
12.—Newcastle and Bettws-y-Crwyn	—
13.—Clungunford, <i>Hopton Castle, Bedstone, and Bucknell</i>	1919
14.—Welshampton, Lyneal and Colemere	—
15.—Bitterley Ecclesiastical Parish, Hopton Cangeford and East Hamlet	—
16.—Knowbury Ecclesiastical Parish	1920
17.—Cold Weston, Heath, Clee St. Margaret, Stoke St. Milborough and Abdon	—
18.—§Kinnerley and Molverley	1920
19.—Llanyblodwel (Nantnawr and Porthywaen)	1922
20.—Trefonen Ecclesiastical Parish (Treflach, Llanforda and Sychtyn)	1924
21.—East Part of Oswestry Rural Parish, Maesbury, Morda, Aston, Woolston, Middleton, and Sweeney	1922
22.—Badger, <i>Beekbury, Kemberton, Ryton, and Boningale</i>	1917
23.—Sheriffhales, Boscobel and Tong	—
24.—*Kinnorsley, Preston-on-the-Weald Moors and Hadley	1920
25.—Lee Brockhurst and Weston and Wixhill (Lee Brockhurst in Shawbury, Weston in Hodnet)	—
26.—Whitchurch Rural— <i>Western Part, Tilstock</i>	1917

† By arrangement the Bridgnorth nurses take the midwifery cases in Oldbury, Eardington, Morville, Astley Abbots, Quatford and Tasley.

* Kinnorsley is included in a district with Bolas Magna and Tibberton affiliated to the Shropshire Nursing Federation in 1918.

§ Knockin is now included with Kinnerley and Molverley.

Additional Districts formed since 1916 :—

The Bog Mine—part of Shelve, Wentnor and Minsterley Parishes	1916
Hope—parts of Hope and Shelve Parishes	1917
Hopesay and Aston-on-Clun	1919
Donnington Wood Ecclesiastical Parish	1920
Child's Ercall, Hinstock and Sambrook	1920
Ironbridge, Coalbrookdale, Jackfield, Broseley, Benthall, Madeley and Coalport	1920
Oakengates Urban District	1920
Wellington Urban District	1920
Llanymynech—Parish of Llanymynech and parts of Moreton and Llanyblodwell Parishes (very small part)	1921
Shawbury, Moreton Corbet, and Lee Brockhurst	1921
Claverley	1921
Whitchurch Urban District	1922
Munslow, Brockton, Holdgate, Tugford, and a small part of Stanton Long Parish	1923
Meole Brace and District	1924
Edstaston, Whixall and Coton Association has been divided into two Associations— Edstaston and Coton, and Whixall.	

Medical Fees.—The fees of medical men called in by midwives under the rules of the Central Midwives Board are paid by the County Council, so that there is now no excuse for a midwife not calling in a doctor, and he is certain of getting his fee. The County Council in every case asks the patient to pay the fee or to show that she is not able to do so, and decides upon further action for recovery if necessary. This procedure should result in the medical practitioners in a large proportion of cases recovering directly from the patient where they are able to pay the fee. When the whole County is provided with trained midwives, there will be no reason why every woman, however poor, should not have adequate midwifery and medical attendance at her confinement. Two hundred and twenty-eight claims were sent in during the year, and £444 7s. 6d. paid to medical practitioners.

Supply of Free Milk.—Milk is supplied free in necessitous cases. Each case is enquired into and certified by the Medical Officer of the Centre, and one of the lady helpers, or where there is no centre, by the health visitor and a local responsible person. The opinion of the Relieving Officer is asked in all cases, and the reports are all scrutinised carefully at the Central Office. There can be no doubt that this is a real preventive work of great value.

Institutional Treatment of expectant and nursing mothers and their infants suffering from Venereal Diseases is carried out under the Venereal Disease Scheme at Cleveland House, Wolverhampton.

Hostels for unmarried Mothers and their Infants.—An arrangement has been made with the Mrs. Legge Memorial Home, Wolverhampton, by which patients are admitted for six months, the County Council paying for the first six weeks, the expense for the remainder of the period being borne by the Home.

Prevention of Rickets.—The prevention and the provision of early treatment of rickets has been strongly emphasised as one of the most important parts of the work of the health visitors. Rickets is a disease which is not without danger to life whilst it lasts, and leaves permanent injury often of a serious character. The mere straightening of a limb is a very different thing from the prevention of the disease. It is now definitely known that rickets is

caused by a deficiency of a vitamin contained in most animal fats and green vegetables, or by the absence of direct sunlight, or by the two combined. It can be prevented or cured by attention to these conditions. There are other food factors of importance such as the amount of calcium in the food and the amount of carbo-hydrate food, and the amount and kind of cereals eaten.

Great attention is paid to improving the conditions of food, fresh air, sunshine, exercise, and cleanliness in all children, but in addition, for the special prevention of rickets, a memorandum emphasising these matters and also advocating the use of crude cod liver oil whenever there is likely to be a shortage of milk fat in the diet, has been issued to health visitors.

Crude cod liver oil is now stocked not only at the Clinics, but by many of the district nurses throughout the County.

OPHTHALMIA NEONATORUM.

Forty-nine cases of ophthalmia neonatorum were notified.

Every case is enquired into for the purpose of finding out whether proper treatment is being given and for supplementing it if necessary. Where a midwife has been in attendance inquiry is also directed to her conduct under the Midwives Act and the disinfection necessary before she attends other cases.

Statement showing how the confinements were attended :—

Number of cases attended by midwives	32
Number of cases attended by medical practitioners	17

How the cases were nursed :—

By nurse-midwives assisted by mothers	7
By relatives	0
By Health Visitors	14
At Eye, and Ear Hospital, Shrewsbury	23
At Lady Forester Hospital	5

Thirty-nine of the cases recovered completely; in six the eyesight was damaged; three children are dead and one has left the County and no information could be obtained.

Seventeen cases of discharging eyes, not notified as Ophthalmia Neonatorum, were visited by Health Visitors, and attended regularly until well.

Sanitary Authorities have power to provide nursing and medical assistance for these cases, and under the Maternity and Child Welfare Act, 1918, the County Council is now also empowered to provide nurses.

A scheme was adopted and came into force in January, 1918, under which two nurses were appointed for health visiting and nursing of measles and ophthalmia neonatorum in certain districts.

The scheme has been extended to the whole County and now includes nursing of ophthalmia neonatorum, and the health visiting of measles, whooping cough, pneumonia and influenza. All the health visitors have been made available for attendance on these cases.

In addition, arrangements have been made with the Shropshire Nursing Federation for the nursing of measles, whooping cough, pneumonia and influenza.

There is an ambulance always available for bringing the mother and child to the Eye and Ear Hospital, Shrewsbury, when such a course is desirable.

In order that all but very slight cases shall be promptly removed to the Eye Hospital, the following letter has been sent to all practitioners in the County :—

“ I give below a copy of two resolutions dealing with ophthalmia neonatorum passed by the Public Health Committee.

"That a circular letter be sent to all the medical men in the County informing them that there have been several disasters to eyesight following on Ophthalmia Neonatorum and that in the opinion of the Public Health Committee all cases of this disease should be treated in the Shropshire Eye, Ear and Throat Hospital. The County Council will send an ambulance on application for removal of mother and child, free of charge.

"If through the absolute refusal of the mother to allow the baby to be removed or some other insurmountable reason the child is not removed to the Hospital, nursing assistance will be provided by the County Council. Practitioners should ask for this assistance by wire or telephone rather than by letter."

(The Hospital will now admit the infant without the mother, if the removal of the mother is impossible.)

"That trained midwives be supplied with nitrate of silver to be dropped into the eyes immediately on the birth of the child. For this purpose it will be necessary to supply $\frac{1}{2}$ gr. tablets of nitrate of silver and a dropper."

As a preventive measure, all trained midwives are being supplied with half grain tablets of nitrate of silver and a dropper, with the following directions:—

During the labour one tablet of Nitrate of Silver and 50 minims of boiled water should be put in a minim glass, and stirred until completely dissolved. Immediately on the birth of the child a few drops of the solution should be put into each eye with the pipette.

It is impossible at present to trace any lessened incidence of ophthalmia on account of this routine measure.

MIDWIVES ACT.

Year.	Number of Midwives practising in the County in June of each year.	Number of Visits paid.	Notifica- tions of having sent for medical help.	Notifications of Still-births		Notifications of death of mother or child with no medical man in attendance.	Notifica- tions of Artificial Feeding by Midwives.	Notifica- tions of Midwives' Liability to be a source of Infection.	Notifica- tions by Midwives of having laid out a Dead Body.
				By Mid- wives.	By Parish Clerks.				
1919	227	482	519	56	88	16	57	..	..
1920	240	651	733	70	73	8	60	9	23
1921	240	675	734	76	..	10	66	11	28
1922	218	635	682	75	..	6	58	19	39
1923	235	649	781	54	..	11	73	32	35

Routine Work under the Act:—

The returns sent in by the certified midwives, although incomplete, show that they attended 3,810 births in 1923, out of a total of 4,900, leaving less than 1,090 or 22 per cent. to be attended by medical men and uncertified midwives.

Sending for Medical Help by Midwives.—An analysis of the reasons for sending for medical help has been made and is given in the following statement. The information available is frequently insufficient :—

<i>For Mother.</i>						
During pregnancy .. .. .	..	..	..	..	..	86
Haemorrhage .. .. .	..	..	..	..	..	34
Threatened abortion .. .. .	..	..	..	..	..	34
Accident .. .. .	..	..	..	..	..	0
Varicose veins .. .. .	..	..	..	..	..	5
Convulsions .. .. .	..	..	..	..	..	8
Deformity .. .. .	..	..	..	..	..	0
Other causes .. .. .	..	..	..	..	..	5
At Labour .. .. .	..	..	..	..	..	510
Premature labour .. .. .	..	..	..	..	..	24
Uterine inertia and prolonged labour .. .. .	..	..	..	..	..	221
Abortions, miscarriages and still-births .. .. .	..	..	..	..	..	34
Abnormal presentation .. .. .	..	..	..	..	..	33
Placenta praevia .. .. .	..	..	..	..	..	6
Haemorrhage .. .. .	..	..	..	..	..	22
Convulsions .. .. .	..	..	..	..	..	6
Ruptured perinaeum .. .. .	..	..	..	..	..	129
Adherent placenta and retained membranes .. .. .	..	..	..	..	..	33
Other causes .. .. .	..	..	..	..	..	2
After Labour .. .. .	..	..	..	..	..	27
Rise of temperature .. .. .	..	..	..	..	..	22
Other causes .. .. .	..	..	..	..	..	5
<i>For Child</i>						
Feebleness .. .. .	..	..	..	..	..	61
Malformation .. .. .	..	..	..	..	..	12
Discharge from eyes .. .. .	..	..	..	..	..	67
Convulsions .. .. .	..	..	..	..	..	10
Other causes .. .. .	..	..	..	..	..	5
Death of child .. .. .	..	..	..	..	..	3

Analysis of the 54 notifications of still-births sent in by midwives shows that—
26 were at full-time ; 28 premature.

The condition of the child pointed to—

Death during labour or shortly before in 31 ; death some time before labour in 23.

The presentations were :—head 28, breech 17. In 9 cases the presentations were not mentioned.

The sex of the children was as follows :—males 24, females 29 ; 1 not stated.

The significance of still-births and miscarriages is dealt with in my report for 1921.

Puerperal Fever.—Sixteen cases were notified, compared with 16 in 1922. Nine cases were attended by trained midwives, and 7 by medical practitioners alone. There were no fatal cases.

Other Accidents of Parturition.—There were 16 deaths of women registered under this heading during the year. I elsewhere deal with the question of notification to the County Medical Officer of deaths of the mother from whatever cause within a month of confinement.

Present supply of Midwives.—In June, 1923, there were 235 midwives registered as practising in the County, compared with 218 at a corresponding period in 1922.

MIDWIVES GROUPED ACCORDING TO NUMBER OF CONFINEMENTS THEY ATTENDED IN 1923.

Midwives who have not sent in returns of confinements	..	..	..	..	6
Midwives who have attended no confinements	..	..	..	..	14
" " " " less than 10 confinements	..	..	..	..	88
" " " " between 10 and 20 confinements.	..	..	..	..	66
" " " " " 20 and 30	"	..	..	..	35
" " " " " 30 and 40	"	..	..	..	6
" " " " " 40 and 50	"	..	..	..	4
" " " " " 50 and 60	"	..	..	..	7
" " " " " 60 and 70	"	..	..	..	6
" " " " " 70 and 100	"	..	..	..	3
" " " " " over 100	"	..	..	..	0

Ten midwives were brought before the Local Supervising Authority during the year. Five of these were cautioned, one severely censured and two asked to send in their resignations owing to old age and inability to comply with the rules. The charges against the remaining two midwives were considered grave, and submitted to the Central Midwives Board. As a result, one midwife has been struck off the roll, and in the other case reports were asked for at three and six months' intervals. These reports were satisfactory and the midwife was allowed to continue in practice.

The number of midwives trained or taken over during the eight years was as follows :—

Trained by County Council and Shropshire Nursing Federation.				Taken over from Rural Midwives Association and paid for by County Council and Shropshire Nursing Federation.			
1916	..	..	9				2
1917	..	..	12				4
1918	..	..	6				3
1919	..	..	7				2
1920	..	..	13				2
1921	..	..	14				0
1922	..	..	13				0
1923	..	..	14				—

Training and Provision of Midwives.—The County Council has acted entirely through the Shropshire Nursing Federation, the County Council bearing three-quarters of the expense of training. The County Council also makes a grant of £20 towards the initial expenses of new associations.

TUBERCULOSIS.

A fairly full statement was made in the report for the year 1920 upon the relative importance of the factors concerned in the production of tuberculosis and of the measures to be taken for prevention. This will not be re-stated, but reference can be made to the annual report for 1920, pages 21 and 22.

I am coming more and more to the opinion that the reduction of plithisis is not dependent primarily upon any particular scheme. In order of importance, I would place—

- (1) The education of the public in health matters—principally in food, exercise, fresh air, sunlight and infection.
- (2) The provision of proper facilities, *e.g.*, houses, playing fields, open spaces, and physical training.
- (3) The various health schemes—Tuberculosis, Child Welfare, and School Medical Inspection. All these schemes take an important place in the education of the public.

In placing these schemes in the third place, their influence as educational factors has been ignored. If their general educational influence is taken into account, their importance is greatly enhanced.

TABLE V.
NOTIFICATIONS CLASSIFIED FOR AGE AND SEX.

Age Periods.		Notifications on Form A.												Total Notifica- tions on Form A.
		Number of Primary Notifications.												
		0 to 1	1 to 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 35	35 to 45	45 to 55	55 to 65	65 and up- wards.	Total Primary Notifi- cations.	
Pulmonary Males .. ..	..	..	2	6	3	13	26	30	21	10	5	5	121	125
.. Females .. ..	..	..	4	14	10	15	23	32	28	8	7	3	144	148
Notified after death Males ..	..	1	1	..	..	1	..	..	2	..	..	1	6	6
.. Females .. ..	..	..	1	..	..	..	..	..	..	1	..	..	2	2
Non-pulmonary Males ..	..	1	14	8	10	8	7	7	2	2	1	..	60	63
.. Females ..	..	1	13	6	11	12	10	13	3	2	1	1	73	75

Age Periods.		Notifications on Form B.					Number of Notifications on Form C.	
		Number of Primary Notifications.				Total Notifica- tions on Form B.	Poor Law Institutions.	Sanatoria.
		Un- der 5	5 to 10	10 to 15	Total Primary Notifica- tions.			
Pulmonary Males	58
.. Females	59
Non-pulmonary Males	15*
.. Females	37*

*These numbers do not represent the cases of non-pulmonary tuberculosis admitted to sanatoria. The numbers are 24 males and 37 females.

TABLE VI.

Year of Notifi- cation.	PERCENTAGES OF PATIENTS KNOWN TO BE ALIVE AT END OF :—											
	The Year of Notification.	1st year after Notification.	2nd year after Notification.	3rd year after Notification.	4th year after Notification.	5th year after Notification.	6th year after Notification.	7th year after Notification.	8th year after Notification.	9th year after Notification.	10th year after Notification.	11th year after Notification.
1912	72.3	63.5	53.1	49.3	47.3	46.4	44.4	44.2	43.8	43.1	42.8	42.7
1913	82.5	64.4	59.6	56.7	55.9	52.3	50.7	49.6	48.7	48.3	47.8	
1914	72.8	58.2	53.5	51.1	48.0	45.5	44.6	43.6	43.2	42.2		
1915	76.2	61.9	57.0	52.8	49.0	46.7	46.4	45.2	45.1			
1916	78.5	65.8	59.9	56.5	55.3	53.6	51.9	50.1				
1917	76.6	64.3	56.8	54.3	52.9	50.8	48.6					
1918	76.7	67.1	63.0	60.1	59.3	57.7						
1919	78.9	72.2	65.5	61.3	57.9							
1920	71.2	60.7	53.8	50.3								
1921	78.2	63.4	55.6									
1922	66.9	47.1										
1923	75.4											

For the purpose of this table those cases that have left the County or in which the diagnosis was wrong have been excluded.

TABLE VII
AFTER-HISTORY OF NOTIFIED CASES SINCE 1912.

Year	No. of cases notified in year	Number of cases that died in years												Known to be alive at end of years											Left County and wrongly diagnosed.	Unac- counted for.	
		1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922			1923
1912	439	117	36	43	15	8	4	8	1	1	3	1	..	306	266	222	205	197	193	185	184	182	179	178	177	8	17
1913	290		50	51	12	8	2	9	4	3	2	1	1		236	183	167	159	156	145	140	137	134	133	131	13	3
1914	267			73	34	12	6	8	6	1	2	1	2			188	149	137	131	123	116	113	110	109	106	13	3
1915	381				89	49	17	14	12	7	1	2	..				286	225	206	189	174	165	164	158	157	28	5
1916	392					81	44	20	11	4	6	4	5					297	141	217	203	198	192	184	176	37	4
1917	403						90	44	29	5	5	6	7						298	243	209	200	195	185	176	40	1
1918	425							93	42	6	10	2	4							306	251	241	228	223	214	54	..
1919	341								67	21	19	11	10								252	229	204	187	176	37	..
1920	325									90	30	18	10									223	186	161	150	27	..
1921	318										66	44	22										238	191	165	21	..
1922	274											85	44											172	115	30	..
1923	273												62												195	16	..

Comparison of Pulmonary Tuberculosis with previous years :—

Years	Cases notified.		Deaths.	Years	Cases notified.		Deaths.
1906	..	2	.. 253	*1912	..	439	.. 208
1907	..	3	.. 236	1913	..	320	.. 146
1908	..	33	.. 230	1914	..	295	.. 204
1909	..	32	.. 225	1915	..	379	.. 214
1910	..	19	.. 206	1916	..	364	.. 206
1911	..	103	.. 216	1917	..	406	.. 199
				1918	..	425	.. 222
				1919	..	341	.. 171
				1920	..	325	.. 143
				1921	..	318	.. 150
				1922	..	274	.. 182
				1923	..	273	.. 157
Average			228	Average			183

* Compulsory notification commenced in 1912.

It will be seen that there has been a very considerable decrease in the number of deaths since compulsory notification came into force.

Analysis of the cases notified during the year shows that 8 were notified after death, 3 on day of death, 3 less than a week before death, 4 between 1 and 2 weeks before death, 13 within a month of death, and 9 within three months of death. Some of the cases of late notification are due to the fact that a medical practitioner was not called in until shortly before death.

This is a distinct improvement on last year.

Enforcement of notification is a duty of the Local Sanitary Authorities. The County Council has on several occasions circularised the profession pointing out the importance of early notification, and there is reason for thinking with good results.

Forty-five of the cases notified were by the Tuberculosis Officers.

ANNUAL DEATHS FOR THE EIGHT YEARS 1916—1923 INCLUSIVE, CLASSIFIED IN AGE PERIODS, SEX, AND URBAN AND RURAL DISTRICTS.

URBAN DISTRICTS.

RURAL DISTRICTS.

Year	All ages.								All ages.							
	0—		15—		25—		45—		65—		0—		15—		25—	
	M.	F.	M.	F.M.	F.M.	F.M.	F.M.	F.	M.	F.M.	F.M.	F.	M.	F.M.	F.M.	F.
1916	48	58	2	3	8	8	28	32	8	14	2	1	52	48
1917	55	52	4	7	7	10	24	24	18	10	2	1	44	48
1918	62	52	6	6	8	12	32	25	12	7	4	2	47	61
1919	52	42	1	5	10	14	15	18	19	3	7	2	42	35
1920	47	28	5	3	3	7	21	8	14	6	4	4	32	36
1921	40	34		3	6	7	12	14	22	9		1	39	37
1922	51	46	2		6	11	26	27	12	8	5		39	46
1923	45	41		3	10	13	22	15	12	9	1	1	40	31
Average	50	44	3	4	7	10	22	20	15	8	3	1	42	43

This table is of interest in many directions. It bears out what has been noticed throughout the country that men suffer more than women in urban districts, but that in rural districts there is no inequality of rates. In the urban districts men are more exposed to workshop and general occupational infection. This being mainly an agricultural county, the difference between male and female mortality is not great.

POSITION OF SCHEME.—This is in all essentials the same as in the year 1921.

WORK UNDER THE SCHEME.—A full description of the work of the Tuberculosis Officers and Health Visitors appeared in the Report for 1918. In addition to the work there set out, each of the Tuberculosis Officers now attends at the Pensions Board for one half-day per week, and one of the Tuberculosis Officers (Dr. Elliott) has superintendent duties in connection with the Shirlett Sanatorium and the Prees Heath Hospital for advanced cases of consumption.

Examination centres have recently been opened at Bridgnorth and Ironbridge, and have already proved of great use.

ATTENDANCES AT DISPENSARIES.

		Notified Cases.			Non-notified Cases		Total.
No.of Cases.	<i>Dispensaries.</i>	Insured.	Non- Insured.	School Children	School Children	Other	
	SHREWSBURY.						
377	Number of patients who attended in 1923 for the first time ..	13	14	9	70	87	193
	Attendances during 1923	582	239	257	282	283	1643
	OSWESTRY.						
249	Number of patients who attended in 1923 for the first time. ..	2	2	2	49	63	118
	Attendances during 1923	195	64	69	140	151	619
	WELLINGTON.						
622	Number of patients who attended in 1923 for the first time ..	12	12	4	138	178	344
	Attendances during 1923	532	363	1223	527	341	2986
	<i>Examination Centres (open once a month).</i>						
	WHITCHURCH.						
41	Number of patients who attended in 1923 for the first time ..	4	1	..	10	6	21
	Attendances during 1923	44	4	54	33	22	157
	LUDLOW.						
51	Number of patients who attended in 1923 for the first time ..	6	1	2	13	6	28
	Attendances during 1923	70	5	14	25	20	134

VISITS BY THE TUBERCULOSIS MEDICAL OFFICERS FOR 1923.

TO INSURED PATIENTS.					TO NON-INSURED PATIENTS.					TO SCHOOL CHILDREN.				
On notifi- cation.	Con- tacts.	Sus- pects.	On dis- charge from Sana- torium.	On other occa- sions.	On notifi- cation.	Con- tacts.	Sus- pects.	On dis- charge from Sana- torium.	On other occa- sions.	On notifi- cation.	Con- tacts.	Sus- pects.	On dis- charge from Sana- torium.	On other occa- sions.
81	14	25	39	401	44	53	42	18	270	32	68	118	5	87
		560					427					310		
							1297							

Visits by Health Visitors to Phthisis Houses in 1923.

To Insured Patients.	To Non-Insured Patients.	To School Children.	Total.
1511	1053	676	3240

King Edward VII. Sanatorium (Shirlett).—The number of patients admitted to the Sanatorium in 1923 was 109, and consisted of:—

Insured patients—Males	42
—Females	21
Non-insured patients—Males	14
—Females	32

The percentage of cases discharged as “arrested,” and without tubercle bacilli in the sputum was 37, compared with 36 in 1922, 48 in 1920, 49 in 1919, 56 in 1918.

The other sanatorium tables have not been repeated this year, but can be found by reference to the Sanatorium Report.

It is gratifying to know that no patient in whom there was a reasonable prospect of arrest or cure of the disease was discharged owing to lack of accommodation, and that the waiting list was always small, so that patients were never kept waiting any considerable length of time.

The policy of concentrating more on the preventive treatment in children and limiting prolonged treatment in adult cases to those who have a distinct chance of recovering has been adopted. This policy means that adults without any real prospect of recovery are kept in as a rule for a month's educational training only, but the rule is varied to some extent where definite and rapid progress is being made. By this means more accommodation is available for children and adults in whom a definite recovery can be expected.

The difficulty in this line of action is to discover the children, who if not dealt with in this manner would be likely to break down in early adult life. The Lady Forester Hospital at Wenlock would have provided accommodation for this purpose in a perfect manner—any infectious cases being sent as at present to Shirlett.

The following is an analysis of the cases admitted to Shirlett Sanatorium from its opening in 1911 until the end of 1923:—

Shirlett Sanatorium, 1911—1923.

Year.	Patients Treated.	Known to be Alive.	Known to be Dead.	Left County.	Unaccounted for.	Cases notified.	Percentage treated at Shirlett.
1911	38	11	19	7	1	..	..
1912	74	38	27	6	3	439	16.8
1913	80	36	36	7	1	290	27.5
1914	114	44	59	10	1	267	42.6
1915	133	56	56	21	..	381	34.9
1916	158	69	66	23	..	392	40.3
1917	164	86	65	13	..	403	40.6
1918	124	65	33	26	..	425	29.1
1919	123	71	32	20	..	341	36.0
1920	120	78	34	8	..	325	36.0
1921	121	81	35	5	..	318	38.0
1922	107	69	31	7	..	274	39.0
1923	109	102	5	2	..	273	39.9
Total	1465	806	498	155	6	4128	35.4

Incidence.—During the year 273 cases of pulmonary tuberculosis and 133 cases of other forms of tuberculosis were notified. There were 157 deaths from pulmonary tuberculosis and 56 deaths from other forms of tuberculosis.

Shropshire Orthopaedic Hospital.—Ninety-six cases were sent to this Hospital by the County Council in 1923. The average length of stay of these cases was 141 days, and the average number of beds occupied 37. The cases were:—

Tuberculosis of the hip 30, spine 29, knee 11, other joints and bones 25, and tuberculous peritonitis 1.

Further details are given in the table on page 20.

The number of cases under supervision at the various after-care centres was 694 in December, 1923.

Shelters.—There are at present over 108 shelters in the County. The County Council have provided 93; Shrewsbury Borough 4; Atcham Rural District Council 1; Whitchurch Urban District Council 2; Drayton Rural and Urban District Councils 2; Chirbury Rural District Council 1; the Ludlow Care Committee 5; in addition, several have been provided by private individuals.

In the treatment and prevention of tuberculosis, shelters should be used for—

- (1) The accommodation of early cases to aid in their recovery.
- (2) The accommodation of advanced cases to prevent infection.
- (3) Sleeping accommodation for children in a crowded phthisical home.

The two latter are the most important from a public health point of view.

Care Scheme.—A Central Care Committee and local Care Committees covering the whole County, have been appointed. Broadly speaking, the object of these Committees is to keep in touch with the cases of phthisis throughout the County and by means of advice and help to enable the patients to live as far as possible a “sanatorium life”; and also to report unfavourable conditions that they cannot remedy.

It is not the duty of members of the Care Committee to systematically visit the cases or to attempt to give professional advice. Generally speaking, apart from occasional visits, they should rely on the reports of the Health Visitors.

Reference should be made to the report for 1920 for details of the reorganised scheme.

Disinfection of Houses.—The position is as stated in the report for 1921.

Examination of Sputum.—It is recognised as of the utmost importance that sputum, if present, should be examined in every case of phthisis, and that the examination should be repeated as often as may be necessary to determine the progress of the case or its infectiousness. The County Council have for many years provided facilities for examination of sputum, and practitioners are urged to make the fullest use of these facilities in every case.

Arrangements have now been made so that with the consent of the practitioners, the health visitor takes specimens when required. In this way specimens should be obtained in all cases where there is any sputum to examine. The details of examinations in 1923 were as follow:—

No. of Patients.	Cases examined.		Cases in which there was no sputum.	Not Examined.	In Institutions (Bicton, &c.)
	Positive.	Negative.			
273	140	49	52	21*	10

* Of the 21 cases not examined, there was objection by the Private Practitioners concerned in 6 cases; in 7 cases the Notifications were received after death; and the remaining 8 patients have died or left the County.

This shows a marked improvement on previous years.

SUGGESTIONS FOR IMPROVING THE SCHEME.—The suggestions here made are principally for the protection of households, particularly of the children against infection from advanced and dangerously infectious cases.

- (1) Removal of children from a house where there is a dangerously infectious case, by means of boarding out. This has been left entirely to Care Committees, and so far it has not been found possible to do much. This great work should be aided by Public Health Authorities.
- (2) The provision of shelters for the use of apparently healthy children in infected households.
- (3) The provision of an open-air school or convalescent home at which ill nourished and suspected tuberculous children might receive open-air treatment. This is under consideration. Such an institution would deal with all feeble children requiring institutional treatment except those suffering from tuberculosis in an infectious condition.
- (4) An increase in the number of sanatorium beds for dangerously infectious cases.
- (5) Better facilities for phthisical families to obtain good houses in which the patient will have a better chance of recovery and with much less risk of infection to others. Sanitary Authorities can solve this problem to a considerable extent by granting in suitable cases one of the Council houses, if necessary, at a reduced rent, or by making a grant towards the rent so that the patient can get a more suitable house. It must be remembered that Local Sanitary Authorities have very important powers and duties with regard to the prevention of tuberculosis.
- (6) The provision of beds, wherever separate beds for phthisical persons cannot be afforded.

A strong effort should be made to get every phthisical person to sleep in a separate bed.

As the Ministry of Health refuses to allow the extension of Preet Heath Sanatorium because it is primarily a small-pox hospital, other schemes for the provision of further accommodation for dangerously infectious cases are under consideration.

The embargo on the provision of more shelters has been removed, and it should now be definitely recognised that shelters will be provided not only for patients, but where this is for various reasons impracticable, for the use of the healthy children in infected households.

It is on these lines rather than on expensive action for the benefit of the individual, such as increased and more expensive sanatorium treatment, farm colonies, training colonies, etc., that a real reduction of phthisis is likely to be brought about, always bearing in mind that the most hopeful work of all is that which tends to bring about a higher state of physical fitness of the population generally (see page 28).

Analysis of home conditions shows that of the patients visited for the first time in 1923—

116 had separate bedrooms.

32 shared bedrooms but had a separate bed.

65 shared beds.

When one considers the smallness, bad ventilation and bad construction of many of these bedrooms, it is obvious that the chances of the spread of the disease are great.

The following statement taken from my last three years' reports deals with such an important matter that it is again repeated :—

Milk Supply in Country Districts.

Now that it is proved that either dairy produce and eggs, or green vegetables in quantities much greater than are consumed by persons in this country are essential for satisfactory growth and development, it should be one of the first aims of public health authorities to see that the supply of milk shall be increased and improved in every possible way.

In towns the problem is an economic and an educational one.

In country districts there is the additional difficulty that there is no retail distribution. The farmer generally prefers to sell his milk in bulk, and the purchaser of small quantities is often looked upon as a nuisance and sometimes refused a supply. He often has to send a considerable distance for his daily supply, at a time convenient to the farmer, and has usually to pay ready money. For these reasons and on account of the high price of milk as a food, the country wage earner and his family usually do with a very small quantity of milk. To this must be greatly attributed the poor physical development of the inhabitants of rural districts—poor considering the advantages they have in many respects.

It appears as if the only solution of this question in country districts is to be found in the keeping of goats by a large proportion of the householders who have a grass patch sufficiently large.

The advantages would be enormous. A goat will supply sufficient milk for a fairly large family. The milk would be absolutely fresh—a most important point—free from dirt, as the milk of animals kept singly and in the open air always is, unless there is gross carelessness; and almost with certainty free from tubercle. The milk too, is as nutritious and wholesome, and in some respects richer, than cows' milk. The trouble of milking and looking after the goat is probably less than the trouble of sending half a mile for the milk. When one adds to all this, the fact that it can be produced by the cottager at much less than the price of cows' milk, one can see that there are great possibilities.

I can conceive no single influence that would cause so much improvement in the health of the people as the consumption of one or two quarts of *fresh* milk by every household. In country districts, by the keeping of goats, this is possible, and at the same time the people would be enriched by obtaining an extremely valuable food at a low cost.

As a sufficient supply of good clean milk is one of the most important parts of the treatment of tuberculosis, it appears desirable that the Sanatorium should take a prominent part in popularising the keeping of goats. This might be done by keeping one or more goats at the Sanatorium so as to familiarise the patients with the management of goats and the benefits to be derived from keeping them. If a proportion of patients discharged from the Sanatorium could be persuaded to keep goats, a great impetus would be given to the movement, with undoubted benefit not only to the consumptive person but the community generally.

A commencement has been made at the Sanatorium.

VENEREAL DISEASE.

No additions have been made to the scheme described in my report for 1917, except the provision of a male orderly in connection with the Shrewsbury Clinic. It consists of:—

- (1) Provision of facilities for diagnosis in connection with the Birmingham University.
- (2) Provision for treatment at—
 - (a) The County Council Clinic, Belmont, Shrewsbury.
 - (b) Wolverhampton and Staffordshire General Hospital.
 - (c) Arrangements with the surrounding hospitals.
 - (d) Arrangements by which girls without homes and suffering from venereal disease can be sent to a Home at Wolverhampton provided by the Lichfield Diocesan Society, for treatment and training; the Home also provides treatment for pregnant women suffering from venereal disease.
- (3) Arrangements for supplying Salvarsan substitutes to Medical practitioners.

- (4) The formation of a Propaganda Committee as a Branch of the National Council for Combating Venereal Diseases, and the formation of nine sub-branches to cover the County.

No subsidiary clinics have so far been started.

As pointed out in my last report there are still many ways in which the scheme can be improved.

One of the most important is the utilisation of the Child Welfare Centres for enquiry and diagnosis. Perhaps an equally important matter is the training of Midwives in the knowledge of venereal disease, the significance of miscarriage, and what steps to take.

A definite effort is at present being made to get the mothers of infants with Ophthalmia Neonatorum to the clinic for treatment.

There is distinct evidence that venereal disease, especially syphilis, has very materially diminished during the last three years.

CASES OF VENEREAL DISEASE TREATED DURING 1923.

Shrewsbury Clinic.			Wolverhampton and Staffordshire General Hospital. Shropshire Patients.			Kidderminster Infirmary. Shropshire Patients.		
Cases. Attendances.			*Cases. Attendances.			*Cases. Attendances.		
Syphilis	187	1142	Syphilis	10	..	Syphilis	1	..
Gonorrhoea	150	2113	Gonorrhoea	14	..	Gonorrhoea	0	..
Other			Other			Other		
conditions	31	67	conditions	6	..	conditions	0	..
Total	368	3322		30	1136		1	1

* At these Clinics the number of cases refers only to those attending for the first time in 1923.

The weakest point in our provision of treatment is the small number of women treated and the impossibility with our present means of treating gonorrhoea in women satisfactorily. For this purpose in-patient treatment at an early stage is almost an essential.

Pathological material sent to Birmingham University for examination during 1923 :—

Nature of Test.					Number of Tests.
For detection of gonococci	..	..			67
For detection of spirochetes	..	..			2
For Wassermann reaction	..	..			334
Gonococcus Complement Fixation					
Tests	..	..	..	..	2

Cleveland House, Wolverhampton.—This Hostel is for girls without homes, and pregnant women suffering from venereal disease. It has proved most useful, and the work, particularly in the treatment of pregnant women to save the infants from disease, is of fundamental importance. During the year 12 cases were admitted from this County, 5 of pregnant women and 7 of girls without suitable homes. Three patients were suffering from syphilis, 7 from gonorrhoea, and 2 from both diseases.

CANCER.

The increase of cancer during the last 60 years, during which time the death-rate has increased fourfold, is the one outstanding failure of preventive medicine.

This increase is to a small extent due to a larger proportion of old persons living now than in times gone by, and is to some extent overstated owing to increased accuracy of diagnosis. The difference of age distribution of the population explains, as the following figures show, the fact that Shropshire has a higher death-rate from cancer than the rest of England and Wales.

DEATH-RATES FROM CANCER.

Year.	County of Salop.	England and Wales.	Year.	County of Salop.	England and Wales.
1894-1905	.978	.816	1914	1.22	1.069
1906	1.019	.917	1915	1.23	1.121
1907	1.013	.909	1916	1.35	1.166
1908	1.082	.909	1917	1.35	1.210
1909	1.159	.952	1918	1.55	1.218
1910	1.195	.967	1919	1.39	1.145
1911	1.07	.993	1920	1.27	1.161
1912	1.08	1.019	1921	1.28	1.215
1913	1.18	1.064	1922	1.42	1.229
			1923	1.50	1.267

Registration County, 1894—1911. Urban and Rural Districts, 1912—1923.

Research into the cause of cancer is becoming very active, and is not so completely confined as in the past to laboratory research. It is very possible that valuable indications pointing to new lines of inquiry may be obtained from investigations into the prevalence of cancer in its various forms in different localities.

Sir George Newman, in his report for 1922, states :—"The Health Committee of the League of Nations, accepting these contributions to the Office International as a starting point, has now decided to promote a special investigation into the causes of the national differences (*e.g.*, England and Wales, Holland and Italy), in the mortality from cancer of certain regions of the body, and for this purpose has appointed a sub-committee, with power to co-opt expert members, which is now beginning its inquiries."

This inquiry should be looked upon as merely the beginning of a type of inquiry that must prove of great value in many directions.

Laboratory research and clinical observations have clearly established the fact that chronic irritation of various kinds arising from (1) chemical agents (coal tar, un-refined paraffin, soot, arsenic), (2) physical agents (heat, repeated injury), (3) infectious agents, will produce cancer in a certain proportion of cases. Many persons are exposed to chronic irritation of this kind without cancer being produced, and it is one of the problems of research to find out why. There appears to be an immunity, possibly somewhat similar to that against infectious disease, and experiments in animals appear to show that there may be an acquired immunity similar to that acquired from an attack of infectious disease, for it is found that animals once unsuccessfully inoculated with cancer, are resistant to a second inoculation, the inference being that the first inoculation although not successful in producing cancer, brings about a change in the system which prevents any further growth. Moreover it has not been possible up to the present to produce another cancerous tumour in an animal that has already developed cancer artificially or spontaneously. This is in accordance with clinical observations in the human subject—if a cancer is completely removed so that there is no recurrence, an independent cancer at some future time in some other part of the body is almost unknown.

These observations are distinct advances, but so far it has not been possible in animals to affect established cancers by inoculation.

The action of Health Authorities can only be directed at present to teaching the public (1) the importance of avoiding chronic irritation, particularly of certain types, (2) the early signs of cancer, (3) the necessity for early treatment. In addition, facilities for diagnosis should be provided.

This matter was dealt with fully in my quarterly report for the third quarter of 1923.

HEART DISEASE.

Four hundred and seventy deaths were attributed to heart disease during the year, about 54 per cent. more than those due to all forms of tuberculosis. This bare statement, which is often used to emphasise the importance of work directed to the prevention of heart disease, and particularly to the prevalence of rheumatism which is the common cause of heart disease in the young, is very misleading. There were no deaths from heart disease under five years of age, only 3 per cent. of the total deaths were under 25, and only 9 per cent. under 45. Sixty-six per cent. of the deaths from heart disease were over 65 years of age. The vast majority of these were probably in no way connected with rheumatism, but were degenerative in character or secondary to disease of the lungs. Nevertheless it is most desirable that efforts should be made to lessen heart disease, particularly by the prevention and treatment of rheumatism. Some effort has been made through the school medical service to educate teachers and parents in the early signs of rheumatism, but the larger problem of general education of the public can only be solved as part of general health propaganda. The important rule with regard to the care of the heart is that it should be rested whilst it is being damaged by infection, and freely exercised at other times. The difficulty, of course, is to know when the influence of infection has passed off. The necessity for some open-air residential school accommodation for children with weakened hearts due to rheumatism and other infection is most desirable. The time has arrived, too, when "acute rheumatism" or "rheumatic fever" should be made notifiable. This would be a small measure entailing little trouble or expense, but it would permit of the investigation of the relation of rheumatism to the various conditions of environment and would probably soon demonstrate the favouring causes and their relative importance.

The Ministry of Health is undertaking a limited investigation through selected medical practitioners. As a result some definite action may be taken.

GOITRE.

In my school reports I have dealt with the question of goitre and its prevention. This disease is very prevalent in many parts of the County, and it is most desirable that our knowledge of its cause and prevention should be fully utilised. The evidence is very strong that minute doses of iodine will prevent this condition and cure it in its early stages. Probably the most satisfactory scheme of prevention will be one in which the whole population of a district is given along with food or water a small quantity of iodine either continuously or several times a year. The amount necessary is so small that it cannot possibly do any harm. The most practical method in a country district is to give the iodine in table salt. For this purpose a salt containing iodine has been put on the market. This salt can then be recommended for general use. In a town the necessary amount of iodine can very easily and without any danger be added to the water at stated intervals. This method is particularly suitable for towns like Shrewsbury and Bridgnorth with a dual water supply.

BACTERIOLOGICAL DIAGNOSIS OF DISEASE.

Examinations are made by the Birmingham University under an agreement with the County Council.

Quarters of 1923.	For Typhoid Fever. Widal's Reaction.			For Diphtheria.			For Phthisis.	
	Positive	Negative	Doubt- ful.	Positive	Negative	Doubt- ful.	Positive	Negative
First	6	20	0	83	226	0	29	105
Second	4	6	0	77	170	0	9	90
Third	0	14	0	64	140	0	18	68
Fourth	2	18	0	55	117	0	14	69
Whole year	12	58	0	279	653	0	70	332
	70			932			402	

Thirty-three other disease products were examined and reported on.

Three hundred and eighty-three specimens of sputum were examined at the Tuberculosis Dispensary with the following results:—74 positive and 309 negative; also 2 specimens of discharge from glands, one proving positive and the other negative.

THE PREVENTION OF DENTAL CARIES.

A leaflet for the prevention of dental caries drawn up by the Society of Medical Officers of Health was published in last year's report.

This teaching is looked upon as one of the most important duties of Health Visitors. All the Medical Officers and Dentists on the staff of the Public Health Department also take every opportunity of spreading this knowledge.

ALCOHOL AND PUBLIC HEALTH.

Reference must be made to previous reports and to the Report of the Advisory Committee appointed by the Central Control Board (Liquor Traffic) for the effect of alcohol on health and the extraordinary effect upon the resources of the country of undue expenditure on alcohol.

This teaching would form an important part of Health Propaganda when the scheme has been established.

EDUCATION IN HEALTH.

In my last two reports, I attempted to show how by a neglect of public health education, and notwithstanding our excellent public health work, the physique of the people was most unsatisfactory, and that education and training in healthy living and the provision of means by which the people could themselves put this teaching into practice, were by far the most urgent of all public health work. In other words the principal factor in a person's health is his own conduct, and knowledge is necessary for correct conduct.

This view is rapidly gaining ground, and it is probable that very soon 'health education' will be one of the important duties of health authorities.

In my school report I have described in some detail the part that the school doctors should play in the education of school children.

The Child Welfare Centres are valued almost entirely as educational factors.

The principal part of the work of the health visitor in the homes of the people is educational.

The district nurse should always be an educator, and for this reason should have a good training in hygiene based on physiology. This aspect of the training of nurses was dealt with fully in my report for 1920, and communications were sent to The General Nursing Council, The Ministry of Health, County Medical Officers of Health Association, The Queen Victoria Nursing Institute of Nurses, and The Shropshire Nursing Federation.

The best work under the scheme for the prevention of tuberculosis is undoubtedly the educational work, and this has to be constantly borne in mind and reiterated or it is apt to be forgotten and not acted upon.

The Venereal Disease scheme, through its propaganda committee, has also contributed to the teaching of the laws of health.

There remains the great question of direct education of the public through newspapers, cinemas, lectures, pamphlets, etc. This could be made a real power with the help of the Ministry of Health. Isolated effort without central assistance and encouragement is difficult.

Whenever it is found possible to establish the great system of continuation classes set out in the Education Act, 1918, education in health will become comparatively easy. I am confident that these continuation classes, although not designed for this purpose, will become a great health measure.

Sunshine, Food, Exercise, and Fresh Air.—Upon these factors the health of the nation principally depends.

It must be clearly understood that these conditions do not act independently, that, for instance, a gross deficiency in one condition may prevent any benefit from another. It is assumed in discussing the benefit to be derived from the perfection of one condition that the other conditions are not so markedly defective as to prevent any benefit, *e.g.*, in the presence of starvation or semi-starvation, exercise may be harmful, and sunlight and fresh air can produce little or no result; to get the full benefit of exercise it must be in the open air, freely circulating, and with suitable clothing.

Exposure to sunshine or the Mercury Vapour lamp will, by the action of the ultra-violet rays—

(1) Cure cases of bone, joint and glandular tuberculosis without operation—the deformities almost disappear.

(2) Cure cases of Lupus (intractable skin tuberculosis).

(3) Cure cases of rickets, and almost remove deformity without operation. X-rays show from day to day the deposition of calcareous matter in the bones.

(4) Raise the Phosphate and Calcium contents of the blood. The importance of this to the pregnant woman in its effect on the unborn child, and to the infant and young child is obvious.

(5) Improve the general nutrition.

It is an axiom that a natural agent that will cure a disease, will, if applied early enough, prevent that disease much more easily.

We have here then an agency which if properly applied will greatly reduce tuberculosis (bones, joints, glands, lungs (?)), rickets, and along with other agencies reduce the amount of malnutrition and disease in general.

The wonderful discoveries showing the effect on health of sunshine, and its curative effect on disease makes it *imperative* that we should lose no time in bringing this knowledge in a practical form to the people, and inducing them to act on it through the health visiting service.

The full utilisation of sunshine for promoting health is not a simple matter. Incautious exposure of a large surface of the body to the mid-day sun is extremely dangerous to life.

Harm may be done to a lesser extent by a smaller but still too sudden and too intense an exposure.

Apart from treatment, what one wants to aim at, is that every child shall, without danger, fully utilise the sunshine available. It is not only a matter of getting into the sunshine as much as possible, but so arranging the clothing or absence of clothing that sufficient surface shall be exposed, and that air shall have free play over the skin to cool it, and the head and neck kept cool.

The great impediments in this country that we have to fight against and overcome, so far as possible, are—

(1) The poor quality of our sunshine as compared with that of many parts of the world.

(2) The interference of sunshine by a smoky atmosphere.

(3) The bad arrangement of our houses in towns, preventing access of sun and often without gardens allowing of space for children to lie out and play.

(4) The absence of open spaces for play.

(5) The habits of the people, formed in ignorance, of keeping infants and children too much indoors and overclothed, instead of allowing them every opportunity of getting out of doors and with little clothing, except in cold weather.

The improvement of housing, the provision of open spaces, and the prevention of smoke is the work of public authorities, all the other work depends upon the intelligence and special education of the people and consequently to a large extent on the provision of a good health visiting service and a good propaganda scheme.

The importance of food, exercise and fresh air in the promotion of health and prevention and cure of disease has been dealt with in previous reports. The advance of knowledge in recent years on these matters has been as important as the advance of knowledge in connection with sunshine, and its spread is equally important.

ISOLATION HOSPITALS.

There has been no alteration of the isolation accommodation in the County for small-pox and other diseases since the statement in my report for 1920. Reference should be made for details to pages 40 and 41 of that report.

A new hospital belonging to the Shrewsbury and Atcham Joint Hospital Board was opened in November. According to the Ministry of Health's standards of floor space and cubic space, it will accommodate 26 patients. It has proved a great convenience to sanitary districts outside the area of Shrewsbury and Atcham.

WATER SUPPLIES.

Under this heading, the most important matters for consideration at the present time are : the provision of (1) a supply for the village of Prees in the Wem Rural District, (2) a supply to the village of Bucknell in the Teme Rural District, (3) a supply to the village of Worthen and Brockton in the Chirbury Rural District.

HOUSING.

This is a convenient opportunity for reviewing the housing position, as the census returns for the County, including those referring to houses, have recently been published. Very special care has been given to make these returns a valuable guide to the housing conditions of the County and the sanitary districts, and there can be no doubt that speaking generally this object has been attained. It will readily be understood that a census of this kind can never supply the accurate and detailed information that can be gained from complete house to house sanitary surveys, but these are not available. The important facts obtainable from the census of June 19th, 1921, will be summarised and commented upon, and afterwards the position reviewed in the light of further developments since that time.

For the sake of exactness the term "structurally separate dwelling" is now used instead of house or tenement. It is defined as "any room or set of rooms having separate access either to a street or to a common landing or staircase accessible to visitors." Where the term "house" is used in the report, it is used in this sense.

"Rooms" include the usual living rooms and kitchens, but exclude sculleries, landings, lobbies, closets, bathrooms or any warehouse, office or shop rooms.

Before considering the houses available, a comparison of the population and the number of families in the census periods 1911 and 1921 is desirable.

1921	Population	243,062	Families	55,878
1911	Population	246,307	Families	54,601
Increase or decrease		— 3,245		+ 1,277

We have here the extraordinary fact of a considerable decrease of population with a much larger increase (percentage) of the number of families. This fact, due, of course, to the high marriage rates of the years 1919—1921 and to the declining size of families, has a very important bearing upon the housing problem, and explains to some extent the scarcity of houses notwithstanding the decrease of population.

The average size of families decreased from 4.38 in 1911 to 4.18 in 1921, but notwithstanding this, the size of families in one-roomed houses increased from 1.22 to 2.33, and in two-roomed houses from 2.49 to 2.71. This is a very serious aspect of the problem and points to the fact that although the general housing conditions may not have very greatly deteriorated, yet the 'bad' have got much worse.

There was an increase of 2,989 in the number of families of five or less, and a decrease of 1,712 in the number of families of six or more, leaving a net increase of 1,277.

TABLE 1.

	1921	1911	Increase (+) or Decrease (—)	
			Amount.	Per cent.
Structurally separate dwellings occupied	55113	54212*	+ 901*	+ 1.7
Structurally separate dwellings vacant	1883	2584	— 701	— 27.1
Private families	55878	54601	+ 1277	+ 2.3
Excess of private families over occupied dwellings	765	389	+ 376	..
Average number of private families per occupied dwelling	1.01	1.01	..	..
Number of persons per occupied dwelling ..	4.41	4.54	..	..

NOTE.—* In 1911, structurally divided houses were not separately identified, and the total dwellings shown for that year are understated to the extent by which such houses were returned as undivided structures instead of as flats or tenements. The dwellings shown for 1921 and 1911 include those occupied by non-private families (240 in 1921).

In comparing the two census years this table shows an apparent increase in the number of occupied dwellings, a considerable decrease in the number of vacant dwellings and a considerable increase in the excess of private families over occupied dwellings.

The number of vacant dwellings in 1921 in all probability includes a considerable proportion of 'unfit' houses, and the reduction of habitable vacant dwellings has probably been much larger than 27 per cent.

The necessity for further houses and larger houses can best be stated in terms of overcrowding of existing houses.

It is necessary to have some arbitrary definition of overcrowding and, for the purpose of the census, overcrowding has been defined as anything in excess of two persons per room. This is no doubt a fairly satisfactory method of indicating generally the amount of overcrowding in a district. It does not take into account the size of the rooms, which undoubtedly do vary considerably in different districts; nor, of course, the age and sex of the occupants, which does not on the whole vary much; nor whether any of the occupants are lodgers (lodgers overcrowd a house greatly) and this probably varies a good deal according to the kind of district.

TABLE 2.

DISTRIBUTION OF PRIVATE FAMILIES ACCORDING TO NUMBER OF PERSONS IN FAMILY.

No. of persons in family.	Private Families.				Number of rooms occupied. 1921	Average number of rooms per family. 1921	Average number of rooms per person.		
	Number. 1921	In- crease or Decrease (—) 1911—21	Distribution per cent.				In all Units of occupa- tion 1921	In 1—9 rooms only.	
			1921	1911				1921	1911
1	3,390	303	6.1	5.7	12,045	3.55	3.55	3.49	3.19
2	9,879	1,017	17.7	16.2	43,820	4.44	2.22	2.16	2.11
3	11,456	1,040	20.4	19.1	54,915	4.79	1.60	1.52	1.50
4	10,061	482	18.0	17.5	50,190	4.99	1.25	1.16	1.16
5	7,741	147	13.9	13.9	40,079	5.18	1.04	0.95	0.95
6—7	8,815	— 848	15.8	17.7	47,973	5.44	0.85	0.76	0.75
8—9	3,353	— 531	6.0	7.1	20,497	6.11	0.73	0.61	0.59
10 & over	1,183	— 333	2.1	2.8	9,435	7.98	0.73	0.51	0.51
Total	55,878	1,277	100.0	100.0	278,954	4.99	1.19	1.12	1.07

TABLE 3.

PERCENTAGE OF OVERCROWDED FAMILIES.

		In Dwellings of—					
		1 room.	2 rooms.	3 rooms.	4 rooms.	5 rooms.	6-7 rooms.
Bishop's Castle M.B.	..	..	5.3	..	..	..	..
Bridgnorth M.B.	..	..	5.5	7.2	3.2	..	..
Church Stretton U.D.	..	..	6.2	..	5.0	..	..
Dawley U.D.	..	100.0	19.6	14.0	5.8	2.6	..
Ellesmere U.D.	..	..	..	..	1.4	..	..
Ludlow M.B.	..	12.5	6.2	9.3	2.7	..	..
Market Drayton U.D.	..	60.0	6.6	6.6	2.7	.4	..
Newport U.D.	..	..	6.5	10.4	4.7	.8	..
Oakengates U.D.	..	77.0	22.7	18.4	5.5	2.1	.6
Oswestry M.B.	..	13.0	5.8	10.9	3.7	.3	..
Shrewsbury M.B.	..	24.7	12.9	13.1	4.0	.7	.07
Wellington U.D.	..	..	10.4	11.5	3.8	.7	.3
Wem U.D.	..	..	7.7	6.2	1.9	.6	..
Wenlock M.B.	..	..	11.3	9.0	3.4	1.3	..
Whitchurch U.D.	..	11.1	7.6	11.2	2.7	1.1	..
Atcham R.D.	..	..	10.8	9.9	3.1	.8	..
Bridgnorth R.D.	..	..	19.7	7.6	1.9	.5	.3
Burford R.D.	..	16.6	14.3	14.5	1.6	..	..
Chirbury R.D.	..	35.7	18.9	13.2	1.5	..	..
Church Stretton R.D.	..	63.4	11.4	5.8	5.4	..	..
Cleobury Mortimer R.D.	..	..	5.9	15.4	5.4	..	..
Clun R.D.	..	72.2	23.7	7.7	1.6	1.6	..
Drayton R.D.	..	..	2.2	7.7	1.9	.5	..
Ellesmere R.D.	..	..	9.8	7.1	2.2	.3	..
Ludlow R.D.	..	20.0	14.4	9.2	2.6	.2	..
Newport R.D.	..	..	19.7	12.8	3.0	1.2	..
Oswestry R.D.	..	7.7	18.9	11.4	3.6	.6	..
Shifnal R.D.	..	12.5	7.7	8.4	3.1	.5	..
Teme R.D.	..	20.0	19.0	9.2	1.4	..	..
Wellington R.D.	..	40.0	17.4	13.3	6.0	.6	..
Wem R.D.	..	33.3	17.7	5.5	1.6	1.0	.3
Whitchurch R.D.	..	..	10.0	11.8	..	..	..
Administrative County—							
Percentage	..	35.4	13.2	10.8	3.5	.73	.06
Number	..	130	421	1238	466	84	6

TABLE 4.
HOUSING OF PRIVATE FAMILIES.

URBAN OR RURAL AREAS.	Rooms per dwelling.	Families per dwelling.	Persons per Family.		Rooms per person. Families in 1—9 rooms only.		Increase or decrease (—) per cent in dwellings	Increase or decrease (—) per cent. in private families	Percentage surplus or deficiency (—) of rooms in 1921 on basis of England and Wales standard 1911	Per cent. population living more than 2 persons to a room.	
			1921	1911	1921	1911				1921	1911
Urban Districts.											
Bishop's Castle ..	5.03	1.03	3.61	3.76	1.29	1.25	— 4.0	— 3.9	6.3	0.4	3.0
Bridgnorth ..	5.03	1.03	3.80	4.19	1.23	1.11	— 2.1	— 1.9	5.2	5.7	10.1
Church Stretton..	6.63	1.03	4.12	4.37	1.42	1.37	12.2	11.5	26.4	1.2	1.7
Dawley ..	4.24	1.01	4.32	4.59	0.96	0.89	1.0	1.6	— 8.2	14.9	18.4
Ellesmere ..	5.38	1.00	3.82	4.06	1.35	1.27	3.2	0.7	15.6	1.9	2.8
Ludlow ..	5.28	1.03	3.88	4.13	1.21	1.14	1.1	1.4	5.8	6.4	9.6
Market Drayton	5.07	1.02	3.91	§	1.22	§	§	§	6.4	5.1	§
Newport ..	4.98	1.01	3.98	4.22	1.19	1.14	— 0.7	— 0.5	5.5	7.7	9.1
Oakengates ..	4.28	1.04	4.45	4.76	0.92	0.87	0.9	3.6	—10.5	17.0	16.9
Oswestry..	5.15	1.04	3.99	4.22	1.21	1.19	2.7	4.4	7.9	6.1	5.6
Shrewsbury ..	5.08	1.04	4.12	4.30	1.14	1.14	3.8	7.0	3.8	8.7	7.6
Wellington ..	4.90	1.03	4.11	4.26	1.12	1.11	3.0	4.7	2.0	7.5	8.5
Wem ..	5.11	1.02	4.04	4.26	1.21	1.23	1.4	2.0	8.9	3.8	5.5
Wenlock ..	4.67	1.00	3.98	4.24	1.10	1.01	— 4.0	— 4.6	— 1.6	8.5	12.8
Whitchurch ..	5.23	1.04	3.94	4.28	1.22	1.20	4.3	6.3	7.7	7.0	6.8
Rural Districts.											
Atcham ..	5.33	1.01	4.34	4.45	1.09	1.04	3.1	3.5	1.4	6.6	7.3
Bridgnorth ..	5.44	1.01	4.14	4.42	1.15	1.04	0.7	— 0.2	3.5	5.6	7.8
Burford ..	5.39	1.03	4.34	4.48	1.13	1.05	—	0.7	5.0	7.3	7.7
Chirbury ..	4.83	1.01	4.18	4.08	1.07	1.10	— 4.1	— 5.1	— 1.8	8.9	5.5
Church Stretton..	5.05	1.01	4.11	4.42	1.11	1.07	0.8	1.4	0.7	8.5	8.5
Cleobury											
Mortimer ..	4.93	1.01	4.52	4.83	1.03	0.96	12.2	12.7	0.3	10.1	9.7
Clun ..	4.92	1.01	4.14	4.32	1.10	1.09	— 1.7	— 1.1	— 0.7	11.0	5.8
Drayton ..	5.79	1.00	4.25	§	1.24	§	§	§	10.9	3.4	§
Ellesmere ..	5.59	1.00	4.37	4.62	1.16	1.09	0.5	0.2	6.4	4.1	6.8
Ludlow ..	5.26	1.02	4.34	4.57	1.10	1.01	— 0.3	0.5	2.7	5.8	7.9
Newport ..	5.03	1.01	4.34	4.58	1.05	0.95	0.4	— 0.2	— 1.5	9.0	13.7
Oswestry..	5.12	1.01	4.32	4.42	1.10	1.06	2.5	2.6	2.3	7.9	9.1
Shifnal ..	5.26	1.01	4.14	4.33	1.14	1.06	— 1.4	— 1.6	2.4	6.0	9.9
Teme ..	5.10	1.01	4.36	4.31	1.06	1.10	— 0.3	— 1.1	— 0.1	6.2	5.6
Wellington ..	4.77	1.01	4.32	4.52	1.02	0.98	4.0	5.2	— 3.0	10.9	11.1
Wem ..	5.52	1.01	4.25	4.32	1.22	1.18	2.6	2.3	11.0	3.9	3.8
Whitchurch ..	5.47	1.01	4.22	4.42	1.19	1.18	6.4	6.4	7.8	4.4	2.4
Administrative County ..	5.09	1.02	4.18	4.38	1.12	1.07	1.7	2.3	2.4	7.9	8.7
Range of Variations—											
Maximum ..	6.63	1.04	4.52	4.83	1.42	1.37	12.2	12.7	26.4	17.0	18.4
Minimum ..	4.24	1.00	3.61	3.76	0.92	0.87	— 4	— 5.1	—10.5	0.4	1.7

§ This district having been created since the Census of 1911, comparative figures are not available.

§ Owing to changes of boundary during the intercensal period of 1911—1921, these figures are not available.

TABLE 5.

HOUSES CLASSIFIED ACCORDING TO NUMBER OF ROOMS.
PERCENTAGES.

	Number of Rooms.							
	1	2	3	4	5	6—7	8—9	10 and over.
Administrative County..	0.7	5.7	20.5	23.9	20.6	17.0	6.6	5.0
RURAL DISTRICTS—								
Atcham	0.2	6.4	19.5	24.9	19.9	13.6	7.2	8.3
Bridgnorth ..	0.1	3.7	21.8	25.1	19.1	14.5	7.4	8.3
Burford	2.1	4.9	19.3	22.4	21.1	13.7	10.5	6.0
Chirbury	1.8	9.6	18.8	26.4	17.6	14.5	6.4	4.9
Church Stretton ..	3.8	6.5	20.6	19.0	21.1	16.0	7.1	5.9
Cleobury Mortimer	0.1	3.2	25.7	26.9	14.1	18.5	7.2	4.3
Clun.. ..	4.8	5.4	23.3	21.3	16.5	16.0	7.4	5.3
Drayton	0.2	2.7	14.7	22.2	23.8	18.4	9.3	8.7
Ellesmere	0.2	2.9	17.0	25.7	21.3	15.3	8.5	9.1
Ludlow	0.2	4.0	19.4	26.2	24.1	13.8	6.7	5.6
Newport	0.3	4.7	22.3	23.1	25.4	13.8	4.5	5.9
Oswestry	0.4	6.6	18.0	27.2	17.5	18.2	6.8	5.3
Shifnal	0.4	4.3	22.8	23.3	21.4	13.3	7.5	7.0
Teme	1.3	5.6	26.2	19.1	17.3	14.6	8.2	7.7
Wellington	0.2	6.5	21.2	29.4	20.9	13.5	4.5	3.8
Wem	0.2	3.1	13.8	21.4	26.2	19.7	9.2	6.4
Whitchurch ..	0.2	4.3	18.3	20.0	25.5	14.9	8.6	8.2
URBAN DISTRICTS—								
Bishop's Castle ..	..	5.6	26.2	20.5	17.3	19.9	5.8	4.7
Bridgnorth	0.9	5.6	24.5	21.5	17.5	17.6	8.3	4.1
Church Stretton ..	..	5.3	9.0	6.6	22.3	24.6	17.9	14.3
Dawley	0.1	6.0	31.8	29.4	15.6	13.2	2.8	1.1
Ellesmere .. ..	..	2.7	7.1	31.3	19.3	27.8	7.8	4.0
Ludlow	1.2	9.3	20.3	18.6	15.1	19.6	9.4	6.5
Market Drayton ..	0.4	5.2	15.4	28.4	20.0	21.5	5.4	3.7
Newport .. ..	..	6.4	19.9	23.7	17.5	22.4	6.4	3.7
Oakengates.. ..	0.5	9.0	27.0	30.7	17.1	12.8	2.4	0.5
Oswestry	1.0	5.8	16.8	18.0	28.6	20.8	6.7	2.3
Shrewsbury	1.1	6.3	20.2	19.5	21.6	21.0	6.9	3.4
Wellington	0.3	9.1	13.6	28.1	22.5	18.7	4.6	3.1
Wem	0.4	2.5	15.8	20.2	32.9	21.8	4.1	2.3
Wenlock	0.1	5.2	28.3	26.2	16.3	15.5	4.7	3.7
Whitchurch	0.7	4.8	18.1	16.1	31.9	18.7	6.4	3.3

Tables 2, 3, 4 and 5 give the main facts concerning housing in the Administrative County and the Sanitary Districts so far as these can be stated in a statistical form. Not only can one district be compared with the others, but also with the standard of housing in England and Wales at the time of the 1911 Census (Table 4). There was a percentage surplus of rooms per person in the County compared with England and Wales of 2.4, the only districts with a marked deficiency being Oakengates and Dawley. In the intercensal period the number of rooms per person has increased from 1.07 to 1.12; dwellings have increased by 1.7 per cent.; private families by 2.3 per cent., and 'overcrowding' has decreased from 8.7 to 7.9 per cent. The amount of overcrowding in the various districts is very instructive, and should have careful consideration (Tables 3 and 4). The urban districts with the largest amount of overcrowding were Oakengates (17), Dawley (14.9), Shrewsbury (8.7), Wenlock (8.5), Newport (7.7), and Wellington (7.5); the rural districts were Clun (11.0), Wellington (10.9), Cleobury Mortimer (10.1), Newport (9.0), and Chirbury (8.5).

Table 3 shows that although the percentage of overcrowding is much higher in houses with one or two rooms, the large majority of overcrowded dwellings are amongst those with three and four rooms. Altogether there were amongst houses with two bedrooms or less, no fewer than 2,255 overcrowded houses. This is a complete answer to those persons who advocate the building of houses with two bedrooms because there is said to be a demand. There would be no demand for such houses, if the families in these 2,255 overcrowded houses moved into houses sufficiently large for their accommodation.

Judging by these figures there is no justification for building two-bedroomed houses in any district of the County.

With regard to the position of housing in urban and rural areas the Registrar-General says—

"Another well marked feature presented by this table which is not new but which may be referred to here, is the relative condition of housing in rural and urban areas. The differences are not great, but the figures of 1911 generally indicated a superiority, from the point of view of number of rooms, of accommodation in rural districts as compared with the similar accommodation available in urban areas; amongst the latter themselves, housing conditions appear to deteriorate with increased urbanisation, the position in the smaller towns being rather more favourable, and in the larger towns slightly worse, than the average for the whole country."

This statement appears to be somewhat misleading, as the superiority of rural areas in this respect is probably mostly due to the greater percentage of large houses with eight or more rooms in rural districts. These have no bearing on the houses of the working classes. The proportion of rooms to persons is generally very high in large houses, and raises the general average.

The following is the most important statement in the Registrar-General's report. It requires very careful examination before it can be accepted as a true representation of the position :—

"In the counties hitherto dealt with, comprising a very large portion of the whole country, the individual densities have generally shown a deterioration, even where the over-all average has improved; the position in Salop, as disclosed by the last two columns of Table IV (Table 2 of this report), *in which no single decrease in density (rooms per person) is recorded, is therefore quite exceptional*, and may, in conjunction with the decrease in the numbers and proportion of people living in the overcrowded conditions referred to on page xiv, *reasonably lead to the inference that the general housing position in Salop in 1921 is distinctly better than it was 10 years before.*"

The reasons for doubting the accuracy of this assertion are :—

(1) The houses of one and two rooms have become considerably more overcrowded, the figures being 2.33 and 2.71 in 1921, compared with 1.22 and 2.49 in 1911.

(2) The present position as stated in the census returns, has only been arrived at by the occupation of 901 houses vacant in 1911. It is well known that a considerable proportion of these houses were below a reasonable standard of fitness for occupation, and would not have been allowed to be inhabited under more favourable housing conditions.

(3) Although the population in the intercensal period decreased there was an increase in the number of families by 1277. It is the ordinary condition for each family to occupy a house, and the more successful individual families have been in getting separate houses and the smaller the number of persons in these families, the greater the congestion in the remainder. In considering the number of houses necessary it is not the population so much as the number of families that must be taken into account.

(4) In all probability the number of lodgers is greater now than before the war. A lodger usually overcrowds a house much more than a member of the family.

For these reasons, I am strongly of opinion that the housing conditions in 1921 in this County, although perhaps they had not deteriorated so rapidly as in other parts of the country, were distinctly inferior to those of 1911.

Allowing that every family should have a house there should have been 1,277 more houses in 1921 than in 1911. As a matter of fact there were just 200 more,* or a shortage of 1,077. It is true that there were 901 more occupied of the vacant houses in 1921 than in 1911, but a considerable proportion of these were not reasonably fit for occupation, and have only been occupied owing to the great scarcity of houses. Moreover, the number of unoccupied houses in 1921 were not sufficient to meet the needs arising from the necessary changes. In 1911, too, structurally divided houses were not separately identified, and the total dwellings were understated to that extent. It is fairly safe to say that 1,000 more houses were required in June, 1921, to bring the standard up to 1911, assuming that every family should have a house.

Since June, 1921, 1,489 houses have been built. It appears, therefore, as if, considering the County as a whole, the deficiency has been made good. This however only allows 489 houses for replacing those that have become unfit for habitation, for improvement of standard of housing and for the provision of a satisfactory surplus which is essential for housing requirements. There is probably still some general deficiency and there is a marked deficiency in certain districts.

As soon as the absolutely essential demands have been met it will be necessary to consider the measures for raising the general standard.

*This is an overstatement; see foot note to Table 1.

TABLE 6.

SHOWING HOUSING PROPOSALS AND HOUSES ACTUALLY BUILT UNDER THE MINISTRY OF HEALTH SCHEME AND BY PRIVATE ENTERPRISE.

Sanitary Districts.	Ministry of Health Scheme.			Private Enterprise since June, 1921.
	Number of Houses in original Scheme.	Number of Houses actually completed up to date.	Number of Houses completed since June, 1921.	
RURAL.				
Atcham	551	90	64	72
Bridgnorth	Nil.	Nil.	Nil.	6
Burford	6	Nil	Nil.	7
Chirbury	N. K.	N. K.	N. K.	1
Church Stretton	N. K.	10	N. K.	N. K.
Cleobury Mortimer	Nil.	Nil.	Nil.	7
Clun.. ..	80	Nil.	Nil.	4
Drayton	90	90	87	20
Ellesmere	Nil.	Nil.	Nil.	11
Ludlow	18	18	18	24
Newport	90	10	10	9
Oswestry	250	134	122	54
Shifnal	Nil.	Nil.	Nil.	8
Teme	Nil.	2	1	1
Wellington	150	50	50	24
Wem	64	Nil.	Nil.	15
Whitchurch	36	36	36	Nil.
URBAN.				
Bishop's Castle	12	12	12	2
Bridgnorth	32	Nil.	Nil.	2
Church Stretton	20	20	20	19
Dawley	Nil.	Nil.	Nil.	3
Ellesmere	20	20	20	Nil.
Ludlow	22	22	Nil.	Nil.
Market Drayton	60	60	56	2
Newport	28	28	28	3
Oakengates.. ..	217	217	217	N. K.
Oswestry	50	50	50	13
Shrewsbury	359	246	160	77
Wellington	51	22	22	32
Wem	52	28	28	4
Wenlock	Nil.	Nil.	Nil.	2
Whitchurch	60	41	41	25
Total ..	2318	1206	1042	447

There can be no doubt that these houses have proved an enormous boon to the County, and although put up at a great cost, they have relieved a condition of affairs that otherwise would have been almost intolerable.

The chief complaint has been that they have been too costly for the ordinary wage earner, and that they have been occupied by persons not previously resident in the district. Neither of these objections is really valid. Practically all the houses have been occupied, and the removal of families to these houses has either created vacant houses or relieved objectionable overcrowding in other houses.

SCAVENGING.

There is not much indication in recent district reports of any material alterations in scavenging methods.

The disposal of refuse is a very important matter. A Joint Consultative Council of Authorities in and around London have considered this question and according to Sir George Newman's report—"The principal precautions recommended were that the refuse should be deposited in shallow layers, a depth of six feet being regarded as a maximum, save in most exceptional circumstances, and that each layer should be promptly covered with earth or other suitable material to the depth of at least nine inches. These measures are intended to prevent nuisances from fire, rats, flies, or smells. Objectionable smells often arise from the tipping of crude refuse into water and the consequent formation and release of offensive gases."

These precautions might well be considered by every Sanitary Authority in the County that has a public scavenging scheme or that provides a tipping ground for refuse.

Considering the important part that flies play in the spread of disease, it should be recognised as one of the most important duties of Sanitary Authorities to reduce their breeding places in every possible way, and to lessen the opportunities for them to come into contact with objectionable matter. The great distances that flies will travel should be borne in mind particularly by Rural Sanitary Authorities.

MEAT INSPECTION.

The lectures and demonstrations on meat inspection in 1922 were repeated in 1923. Inspectors from the following districts attended :—*Rural Districts*—Atcham, Bridgnorth, Shifnal, Oswestry, Wellington, Ludlow, Wem, Ellesmere ; *Urban Districts*—Church Stretton, Wenlock, Bishop's Castle, Shrewsbury, Dawley, Newport, Wem, Oakengates and Market Drayton.

The lectures proved highly successful. Their necessity is obvious, and I should advise their repetition each year until some fuller course of instruction can be provided.

FOOD AND DRUGS.

Return of samples taken by members of the Shropshire Constabulary for analysis under the Food and Drugs Acts during 1923 :—

Nature of Sample.	Number taken.	Genuine.	Adulterated.	Remarks.
Milk	220	193	27	17 Cautioned. 2 Dismissed. 1 Fined £3. 2 Fined £10 each and £5 special costs.
Jam	3	3	—	1 Fined £5.
Margarine ..	3	3	—	1 Fined £1.
Butter	6	6	—	1 ordered to pay Costs—57/6. 1 Fined £5 and Costs £4 14s. 6d. 1 ordered to pay Costs—43/-.

Of 220 samples of milk analysed :—

55	contained fat above	4 per cent.
78	„ „ between	3.5 per cent. and 4 per cent.
64	„ „ „	3.0 „ 3.5 „
15	„ „ „	2.5 „ 3.0 „
8	„ „ below	2.5 „
77	non-fatty solids	above 9 per cent.
119	„ „ „	between 8.5 per cent. and 9 per cent.
24	„ „ „	below 8.5 per cent.

Report of administration in connection with the Public Health (Milk and Cream) Regulations, 1912, for the year ended December, 1923 :—

1. Milk and Cream not sold as Preserved Cream—

	Number of samples examined for the presence of a preservative.	Number in which a preservative was reported to be present.
Milk	220	<i>Nil.</i>
Cream	<i>Nil.</i>	<i>Nil.</i>

2. Cream sold as Preserved Cream—*Nil.*

(a) Instances in which samples have been submitted for analysis to ascertain if the statements on the label as to preservatives were correct :

(i) Correct statements made	..	..	..	—
(ii) Statements incorrect	..	..	..	—

(b) Determinations made of Milk Fat in Cream sold as Preserved Cream :

(i) Above 35 per cent.	..	..	..	—
(ii) Below 35 per cent.	..	..	..	—
Not stated	..	..	..	—

